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Book

Burt.

11

AN
HISTORICAL AND STATISTICAL
ACCOUNT OF
LIFE ASSURANCE.

LIFE ASSURANCE.

AN

HISTORICAL AND STATISTICAL

ACCOUNT OF THE

POPULATION, THE LAW OF MORTALITY,

AND THE DIFFERENT

SYSTEMS OF LIFE ASSURANCE;

INCLUDING

THE VALIDITY AND NON-VALIDITY

OF

LIFE POLICIES:

WITH OBSERVATIONS ON

FRIENDLY SOCIETIES

AND

SAVINGS' BANKS;

TO WHICH IS ADDED

A REVIEW OF LIFE ASSURANCE,

EXPLANATORY OF THE NATURE, ADVANTAGES, AND THE VARIOUS
PURPOSES TO WHICH IT MAY BE APPLIED.

By **ALFRED BURT, Esq.,**

SECRETARY TO A LIFE OFFICE.

"Quam quis que novit artem, in ea sé exerceat."—CIC.

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ERRATA.

Pages 4 and 6, Preface, for *we*, read *I*.

Page 17, line 8, for *exactly five times*, read *nearly seven times*.

Page 19, lines 27 and 32, for 10,930, read 9,930. ✓

Page 102, line 21, after the word *profit*, follow lines 25 and 26, beginning with the words *it appears*, and ending with the words *amounted to £13,000*.

Page 148, line 25, for *my*, read *our*; for *me*, read *us*.

Page 166, line 30, for *on a sum of £2,000*, read *or a sum of £2,000*

Page 206, foot note, line 6, for *mistake*, read *misstate*.

tific disquisitions on questions of Life Contingencies.

The necessity for such a work as I propose must be admitted to exist, for, notwithstanding the works which have been published upon Insurance, and the uniformity

of principle which pervades them all, yet the doctrine of Insurance is not fully known and understood. This arises in some measure from the abstract nature of the doctrine of probabilities, the rate of mortality, and the comparative duration of life, and from many of the authors having treated this abstruse subject in too brief, technical, and scientific a manner to make it intelligible to such as are entirely ignorant of this branch of knowledge.

The merit of the best works on Life Assurance is the elaborate and important calculations which they contain, though, from their style, they frequently conduce to no other end than to deter from perusing them those who desire only to be instructed in the nature and benefit of Life Assurance.

As many persons cannot spare the time, and few will take the trouble to direct their attention to the subject of Life Contingencies, and as all cases of assurance must necessarily be attended with a number of difficulties in the mathematical details of the subject, it is not to be wondered at, if from a cursory, inattentive, and unconnected perusal of the works we allude to, a great part of the public should remain unacquainted with the principles and practice of Life Assurance.

The present work has been written with the view of furnishing information to those who may be desirous of acquiring a knowledge of the principles of Life Assurance ;

and in order to effect this object I have endeavoured to simplify the whole subject. The proposition which it is my desire to establish is that the *data* and deductions upon which the system of Life Assurance is founded are as satisfactory and conclusive as those of any other branch of commerce. In establishing this position I have endeavoured to make myself perfectly intelligible, and I trust I have succeeded; for it requires only an ordinary knowledge of the English language and arithmetic to understand clearly what is advanced in the following pages. This knowledge is possessed by the middle classes of the country, and I wish that it was as easy to induce that respectable and intelligent body to avail themselves of the benefits as to make them understand the terms and conditions of Life Assurance. As a means of effecting this *desideratum*, it is necessary that the advantages which would accrue from it should be fully and forcibly explained, which cannot be accomplished without that methodical arrangement of the subject which will elucidate and impress upon the mind the principles involved in the question at issue. That arrangement, I trust, will be found in this treatise, and also that the following parts into which I have divided the subject, embracing the history, statistics, and science of Life Assurance, will be found to contain many interesting facts and important principles.

In the first part we have considered the Population; in the second we have given an Historical View of the Tables of Mortality; in the third traced the Rise and Progress of Life Assurance; in the fourth, the Principle and Practice of the Science of Life Assurance, and the Validity and Non-Validity of Life Policies; in the fifth a Brief Sketch of Friendly Societies and Savings' Banks; and in the sixth part we have concluded with a Review of Life Assurance.

A familiar acquaintance with the construction and use of life tables constitutes a most important means of acquiring an accurate knowledge of the nature and benefits of Life Assurance, and the first elementary point of information connected with the subject of Life Contingencies.

I cannot conclude without acknowledging that to a considerable extent I am indebted for my materials to the learned and able works of Mr. Francis Bailey, Joshua Milne, Charles Babbage, William Morgan, M'Culloch, Gompertz, De Morgan, and other distinguished writers; and should I succeed in facilitating the study of these authors, I shall consider that my labours have not been entirely useless.

A. B.

Melbourne-square, London,

April, 1849.

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LIFE ASSURANCE.

INTRODUCTORY OBSERVATIONS.

THE GENERAL PRINCIPLES OF ASSURANCE EXPLAINED.

LIFE Assurance Companies may be placed among the most useful institutions of modern times—not only for the benefits they confer on the individual, but on society at large, inasmuch as they are the means of gradually accumulating productive capital—while the annual premiums are considered as a part of expenditure, they and the continually growing amount of interest on them are so much added to the productive capital of the community.

The number of persons interested, and the great amount of capital invested in the hands of companies, prove that information upon matters of this kind is most important; and that the public should be put in possession of the means of forming correct opinions as to the adequacy and equity of the term upon which it is estimated that capital to the amount of fifty millions has been already invested,* yielding a revenue of upwards of £1,000,000 per annum to Government.

“ The sums accumulated in the hands of the various Life Assurance Offices in the kingdom, and which form a part of the savings of the assured, amount to at least forty millions of money—an estimate which will not be

* First Report Joint Stock Companies, 1844.

thought extravagant when it is known that the assets of one office, the Equitable Assurance Company, form one-fourth of that sum.”*

The rapidly-accumulating property, &c., of Life Assurance Companies, with engagements computed at upwards of one hundred and twenty million pounds sterling, and extending so far towards maturity and affecting the interests of generations yet unborn, may be expected to increase when the principles are more generally understood.

In consequence of the ignorance of the public as to the exact principles of Life Assurance, many erroneous opinions are formed respecting the capital of Life Assurance Companies, and their business investments; which are supposed to partake of a speculative character; and from the importance of the question we are desirous to offer a few observations before entering into an examination of the different principles and advantages of Life Assurance.

Life Assurance not being either generally or accurately understood, persons are accustomed to view the life risk in the light of a commercial speculation rather than the profound and scientific scheme which it really is; but when the principle upon which that security is based is rightly comprehended, it will be found not only to be certain and secure, but that there are no grounds for apprehending, under any possible contingency, a crash among the Life Offices, as amongst the railways or other speculative undertakings, for the business investments of such Life Offices do not partake of a speculative character. Even a panic in the money world, which brings destruction upon other interests, must benefit the Life Offices.

* Porter's "Progress of the Nation," p. 606.

The recent events in the money world—the arrest of the spirit of enterprise—the wildness of railroad speculation—the explosion of bubbles, and the wholesale suspension of premature projects, are familiar to the Stock Exchange and scrip speculators. Disastrous as the consequences of these events were, for a time, to healthy enterprise, and the occupations of every-day life, nevertheless the Life Offices have been silently making their way, like the under-current in the storm, escaping the disasters to which all the other great monied interests of the empire have been more or less subjected.

The pecuniary interest of Life Offices is beneficially affected by the chances and changes, the shocks and disasters in the speculative world, for money is always enhanced in value, and money is the sole stock in trade of the Life Offices. The known and acknowledged laws of mortality on which their tables are founded could only be materially altered by some mighty convulsion far beyond human forethought or human provision; for there is nothing in the commercial world which approaches, even remotely, to the security of a well-established and prudently-managed Assurance Office.

The records of Life Offices afford no instance of a legally-established Assurance Office having failed to fulfil its engagements.

How many Life Assurance Companies have been called into existence within the last century; millions of capital have been subscribed; millions have been paid up and invested; and not a single instance can be adduced of any fairly or properly-constituted office having failed, or of loss having accrued to the shareholders. Notwithstanding the extraordinary competition that exists,

considerable profits have in many instances been realised, and the shares are quoted at high premiums in the market. Perhaps no species of investment has proved so invariably prosperous. Although it may appear that Life Assurance Companies are subjected to a variety of contingencies, to numerous casualties and chances, the results have ever been the same—great and extraordinary success has always attended them.

That instances of “failure” at some “Life Offices,” as they were called, can be adduced, we do not mean to deny; but these have invariably proved to be attempts at gross imposition.*

That several Life Offices have within the last few years been closed is well known; but the discontinuance was perfectly voluntary, and their engagements were all made good; therefore that fact, so far from operating in any way to their discredit, is, on the contrary, a practical evidence that the field for imposition or fraud is restricted by the very nature and character of the business of Life Assurance Companies.

Gambling in Life Offices is quite out of the question. The shares are never, under any circumstances, at a premium at starting, and therefore offer no attraction to scrip speculators. Impositions cannot, in fact, be carried on to any extent or duration with Life Offices, for the standard value of life at all ages is well known, and the true risk, therefore, easily defined and understood; while the required advances for expenses attending the establish-

* The “West Middlesex” imposition was a professed “Annuity Office,” and its plunder consisted principally of the large deposits from annuitants, not premiums from life assurers.

ment and management of such institutions are comparatively limited in amount.

And in the event of Life Offices failing to obtain business, and resolving in consequence to close their establishments, the holders of policies therein run no risk, for under such circumstances the office liabilities would be comparatively small in amount, and the pledged capital, with the paid-up premiums, would be ample security.

Even in the failure of a mutual Life Assurance Society, whose only property is the subscribed premiums, there would be no considerable loss, as all probabilities or contingencies are calculated and included in the charge for premiums, and the deposits for annuities.

There is, in fact, no such extended field for successful imposition as in enterprises which are mere adventures, and which call for actual outlay of the subscribed capital.

These considerations furnish an answer to the unfounded apprehensions of those who infer disastrous consequences from the increase of Life Offices. And it should be remembered that the field for imposition is very circumscribed from the known tangible basis on which the risk is founded, or if not founded, may be exposed and avoided; and that the classes who are Life Assurers are not the ignorant, friendless, and inexperienced members of the community, but well-circumstanced and intelligent persons, and capable of forming a correct estimate of the value and solidity of the principles of assurance.

We are, therefore, under no apprehension that mischief can be produced by Life Offices, or by their agents, however rash, however unprincipled they might be, or, in fact, how ill-timed the projects in number or extent.

Unlike friendly societies, they cannot offer any terms hazardous to their stability, without being immediately detected and exposed. Unlike the savings' banks, which have no such security, Life Assurance Companies stand on a footing combining the results of past experience for a foundation with names pledged to the honourable application of the investments as security against every contingency.

It is, therefore, a mistaken and narrow view of this most important question, to regard the increase of Life Offices as detrimental to the interests of mankind; which, so far from being regarded with distrust or suspicion, we ought to view as a new proof of the increasing providence of the times, and an indication of national wealth and security. Indeed, it is beyond doubt that, however numerous the existing companies, there is still a vast field for profitable operation; and it may be reasonably expected that the progressive wants of the community will demand the establishment of new societies.

We have prefaced this work with these observations, to show that Life Offices must not be confounded with mere ordinary business establishments, subjected to the casualties and accidents of commerce, against which there is no safety, and in which no confidence can be reposed, but as institutions that, at a future period, when present influences, which have their foundation in the mere excitement of the day, have passed away, will realise all that they promise.

CHAPTER I.

STATISTICAL VIEW OF THE POPULATION.

THE object of a census is to throw a clear light upon the general condition of the community. The public, however, are slow to believe that questions relating to themselves and their households can have any bearing on the general good, and forget that, in accounts of large numbers, the individual is wholly lost sight of in the average; but that the average can only be obtained by an accurate knowledge of all that pertains to the individual. England is far behind most countries in Europe in statistical returns, and we have hitherto been obliged to refer to societies and to individuals for that information which in Sweden, Prussia, and France deservedly occupies the attention of Government.

Since 1749, the returns of the annual births, and of the deaths at different ages, in all Sweden and Finland, have by order of the Government been made to the Commissioners appointed to superintend the execution of this order; and the number of the people of every age is also returned once in three years, and both in the enumerations and the registers the sexes are distinguished. Such re-

turns do honour to the country of a Charles V., a Gustavus, a Linnæus, and a Berzelius.

Until the Registration Act passed the national statistics were necessarily imperfect, and laid us open to the censures which the author of a work, worthy the illustrious name he bears, has expressed in commenting upon former censuses:—"Although England may be regarded as the cradle of political arithmetic, through the researches of Petty, Shoot, King, Graunt, Halley, Davenant, and others, yet the statistics of the population of that country have for a long time remained exceedingly defective; and even the most recent materials are still in the highest degree unsatisfactory."*

The evidence before the Parliamentary "Committee on Joint Stock Companies," given by Mr. Morgan, Mr. Kirkpatrick, Mr. Griffith Davies, and Mr. Ansell, the actuaries of four of the largest London Life Offices, point to the same deficiencies, which have been suffered to continue more than forty years from the date of the first English census.

We have no authentic account of the census, or regular statistic returns of population in this country earlier than 1801. During the preceding century many attempts were made to form a computation of the numbers in England and Wales, and these attempts were revised after the completion of the census by the Government actuary, Mr. Finlaison; and the number living at each decennial period of the eighteenth century was adopted upon his authority

* "Handbuck der Populationistik oder der Volker-und Menschen Kunde nach Statistischen Erhebniissen," Von Dr. Chr. Pernaulli: Article "Britische Monarchie," p. 535.

by the late Mr. Rickman. As an estimate of the population before the enumeration in 1801 always depended much upon conjecture and opinion, on account of the great acknowledged deficiencies of the registers, the returns must necessarily be very imperfect, and can afford no correct information respecting the increase or decrease of births or deaths.

The census of 1801 has contributed essentially to the development of the true theory of population; and these investigations have rendered important services to mankind; but the facts since elicited, and the further prosecution of the inquiries, have shown that, while the study of the doctrine of population is fraught with instruction, and is suggestive of prudence, it is calculated to inspire a greater confidence in the ordinances of nature.

The extension of which the reproductive force in the population is susceptible, and the progress of science and industry, must set at rest the alarm which was excited at the close of the last century of the depopulation of the kingdom. This opinion was advanced by the late Dr. Richard Price, who based his computation upon an incorrect census of the population. He calculated the increased number of deaths in an increased and increasing population, without reference to the numbers out of which they occurred; he therefore arrived at the conclusion that the population of England was actually decreasing year by year, which has apparently never prevailed for any length of time since the earliest historical ages. The population abstracts afford ground for believing that the general population of England and Wales has been increasing ever since the year 1710.

“ A population increases in regular geometrical pro-

C

gression when the births exceed the deaths; and the ratio of the births and of the deaths to the population remains constant. Thus, in England every 100 persons living in 1801 had increased to 132 in 1821; and every 100 persons living in 1821 had increased to 132 in 1841; the 100 persons living in 1801 had, therefore, increased to 175 in 1841; and at the same rate will amount to 200 in the year 1850, and to 300 in the year 1879. The mean rate of increase is 0.141 annually, which was probably the excess of the births over the deaths.

“Grain, fruit, animals, also increase in geometrical progression; but the increase of capital at compound interest is the most familiar example of this kind of progression, and may render it intelligible to the general reader. Thus at 1.41 per cent. increase annually, 100 persons became 132 in twenty years, and 175 in forty years; upon the same principle that £100 put out at £3 per cent. per annum compound interest in 1801, would have amounted to nearly £181 by the year 1821, and to £326 by 1841.”*

It has been proved that population has increased in geometrical progression ever since the first census in 1801, and the rate of progression has been such that, if it continue, the numbers will have doubled in 1850; double the number of families will exist, and must be supplied with subsistence in England. But there will also be double the number of men to create subsistence and capital for their families; to man her fleets; to work the mines and manufactures; to extend the commerce; and to open new regions for colonisation.

The following table shows the total population of Eng-

* William Farr, on the increase of the population.

land, Wales, and Scotland, and the average increase at each of the two enumerations of 1831 and 1841 :—

	POPULATION.		Actual Increase of Persons in Ten Years between 1831 and 1841.	Increase per Day between 1831 and 1841.
	1831.	1841.		
England.....	13,091,005	15,000,154	1,909,149	523
Wales	806,182	911,603	105,421	28
Scotland	2,365,114	2,620,184	255,070	70
British Islands	103,710	124,040	20,330	5
Army and Navy	227,017	188,453		
Total	16,643,028	18,844,434	2,201,406	603

From the above statement it will be seen that the average increase of population in Great Britain during the ten years ending 7th of June, 1841, was 603 persons per day, or 220,140 per annum, which exhibits the rate of increase of 132 per cent., and furnishes the means of calculating, with a very near approach to certainty, what will be the future increase of the population in this country. It follows, therefore, as a necessary consequence, that the advantages which Life Offices possess are of a progressive and extending character, and that the apprehensions to which we have already adverted are utterly unfounded.

GENERAL POPULATION OF THE PROFESSIONS, TRADES, AND OCCUPATIONS.

The substance of the following statements is taken from the Government population returns of 1841:—

In 1831 it was estimated that there were in Great Britain, exclusive of their dependents, of the classes belonging to

	FAMILIES.
The Aristocracy..... from 3,000 to	4,000
Of Esquires and Landed Gentlemen, Stockholders, &c.....from 50,000 to 60,000	
Clergy of all denominations	36,000
Lawyers	30,000
Physicians, Surgeons, and Apothecaries	50,000
Farming Tenants (besides their labourers).....	250,000
Merchants, Shopkeepers, and General Traders...	900,000
Of Manufacturers, in all lines	500,000
Total.....	<u>1,826,000</u>

MINE PROPRIETORS, AGENTS, &c.

The population returns for 1841 show that the population of the Mining districts of England and Wales exceeds those of nearly every profession of the Kingdom, having a total population of nearly 2,000,000

The number of persons employed in the mines of the United Kingdom is about 250,000

Since the period referred to, however, a considerable increase has taken place; and many persons were probably not included in that enumeration.*

LAW, MEDICINE, DIVINITY, &c.

The Legal Interest in England and Wales in 1841 numbered.....	14,697
The Medical Profession, including Chemists and Druggists	27,509
The Clergymen and Ministers, about... ..	19,000
Allowing for non-enumeration, indirect interests, the total number may probably amount to about.....	180,000

* The *Mining Journal* states that the number of mines in the mining counties in the United Kingdom is computed to be about 1,770. It is difficult to obtain an exact return of all the mines in the kingdom; but the following list, however, in round numbers, may be taken as a near approximation to correctness:—

COUNTY.	Name and Description of Mine.	Total Number
Cornwall and Devon	Tin, copper, lead, iron, zinc, and antimony.....	350
Derbyshire and Stafford	Coal, salt, lead, iron, copper, zinc	150
Worcester and Leicester	Coal, salt, lead, iron, &c.	100
Warwick, Gloucester, and Somerset	Coal, lead, iron, manganese, &c.	100
Nottingham, Lincoln, & Shropshire	Zinc, coal, iron, lead, and gypsum	50
Chester and Staffordshire	Coal, lead, iron, and salt	120
Lancashire and Yorkshire	Coal, lead, silver, iron, &c.	100
Westmoreland and Cumberland ..	Lead, copper, silver, antimony, zinc, and iron	100
Durham and Northumberland	Coal, iron, lead, &c.	100
Wales	Coal, lead, zinc, and copper	200
Scotland	Ditto ditto	150
Ireland	Ditto ditto	250
Total		1,770

The annual value of the mineral productions is £37,622,000.

It appears that the Army, including the Irish forces, and those abroad, consisted of 131,000 of which 42,000 were at home; only a small portion of these were insured or insurable.

The royal and commercial Navies together numbered (including marines, pilots, harbour-masters, and all persons engaged in inland navigation) about 290,000

The following comparison of the Mining interest with the Manufacturing, also tends to show that the importance attached to the mining classes is not exaggerated:—

Mining 2,000,000

Cotton..... 377,662

Wool and Worsted..... 167,296

Silk 83,773

Flax and Linen 85,213

Hose and Lace 96,302

The Manufacturing interest includes weavers, spinners, factory children, and workers; but nearly one-half of the total number are women, or female children under twenty years of age 810,246

The number of persons directly or indirectly employed in the various branches of the Building Interest is 700,000

The Licensed Victuallers, from the same returns, number 101,000

The Pawnbrokers, by the same official statement, are computed at 2,693

Their collaterals may be taken at as many more.

The following summary will place this branch of the subject in a correct point of view :—

The Mining population, numbering upwards of	2,000,000
The Clerical, Legal, and Medical	180,000
The Army, Navy, and Marine	290,000
The Licensed Victuallers	100,000
The Pawnbrokers	6,000
The Architects and Builders	700,000
The Manufacturing (exclusive of females, and children of both sexes).....	350,000
	<hr/>
Total.....	3,626,000
	<hr/>

The Mining interest being computed at upwards of 2,000,000, being more than double the whole of the Manufacturing population, and more than equal that of the Legal, Clerical, Medical, Army, Navy, and Marine ; the Licensed Victuallers, the Pawnbrokers, and the Architects and Builders.

COMPARISON OF THE POPULATION OF THE BRITISH EMPIRE WITH DIFFERENT STATES OF EUROPE.

The inhabitants of the United Kingdom, according to the returns made in 1845, numbered about	20,000,000
The Colonists, subjects, and tributaries in the Colonies and settlements belonging to the British Empire, amount to about	136,079,000
	<hr/>
Total about	156,079,000
	<hr/> <hr/>

There are only three European States with a population more numerous :—

Russia.....	about	63,000,000
Austria	,,	37,000,000
France	,,	35,000,000
		<hr/>
Total		135,000,000
		<hr/> <hr/>

But, taking the whole British Empire, it is certain that no other state in the world is peopled so extensively, excepting the Chinese,* whose superiority in this respect is doubtful, because Chinese statistics are not to be depended upon. The British Empire is more than double the size of all

* The population of China, according to Lord Macartney, in 1795, was 333,000,000; but later accounts make it 200,000,000.

Europe, and it is more than four times as populous as France, twice and a-half as Russia, and amounts alone to the united population of Russia, Austria, France, Prussia, Spain, and Holland. The whole human race is estimated at 800,000,000; the British Empire at 156,000,000; so that its population comprises upwards of one-fifth of the human race. The population tributary or subject to the British people numbers exactly five times its own amount.

CHAPTER II.

HISTORICAL VIEW OF THE TABLES OF MORTALITY.

THIS subject is divided into three parts:—In the first we shall give a brief sketch of the law of mortality ; in the second part we shall demonstrate the probabilities and the expectation of life ; in the third part we shall give the history of this branch of knowledge on the comparative merits of the different tables of mortality, with as much brevity as appears to be consistent with the chief object—that of conveying correct and useful information.

LAW OF HUMAN MORTALITY.

When the uniformity of anatomical structure in different individuals of the human species is considered, and the great power possessed by the human body of so adapting itself to the circumstances which it is placed in as to avoid injury from changes in those circumstances, it will appear natural to expect, *à priori*, that when the circumstances of the people are not greatly different, the law of mortality will be nearly the same ; and from a comparison of the best tables of mortality yet constructed, it is believed that this expectation will be realised, whenever a sufficient number of correct observations shall have been made, under circumstances sufficiently varied.

The law of human mortality is, that when a sufficient number of observations have been made to determine how many persons out of a given number born alive had, on an average, been dead at the end of each year, until the whole had died, then a table representing the numbers remaining alive at the end of each year would be what is ordinarily termed a table of mortality; and such a table will furnish us with the means of measuring the probability that an individual of any given age will live to the end of a specified term.

The most simple mode of ascertaining the actual number of deaths which, on an average, takes place in the several years of life among a given number of persons alive at the beginning of each year, would be to record the births of a large number of children—say 100,000—and then take a correct account of the numbers that remained alive at the end of the first year, at the end of the second year, and the third year, and so from year to year, until the whole number became extinct; these numbers being arranged in the order of the several years of age to which they applied, and the differences between each two successive terms in such table would be the numbers dying in the several years of life. The sum of those differences would evidently be equal to the number born.

Thus, of 10,000 persons alive at the age of 20, 70 would die in the following year, and consequently there would be

9930 living at age 21. Now, if it be required to determine the probability that a person aged 20 would live one year, or to the age of 21, we should say (assuming that the facts would correspond with the mortality table), that there were 10,000 possible cases by which the event may happen or fail—that is, that there were 10,000 which

9930

favoured the person being alive, or the happening of the event, and 70 cases which favoured his being dead, or the failing of the event.

The process by which the conclusions are arrived at upon a subject of so much uncertainty as the duration of human life, are based upon observations in different countries and at various times during the last 150 years, exhibiting the actual number of births and deaths which have occurred in a particular locality, and during a certain specified period; showing the relative proportions of births and deaths, the average duration of life among particular classes, the actual number of deaths at various ages, and out of a certain number born on the same day the precise number which were living in each succeeding year, from one year to one hundred.

METHOD OF CALCULATING THE CASUAL- TIES AND PROBABILITIES OF THE CHANCES OF LIFE.

Whilst nothing is more certain than that the laws of mortality are constant in their operation, so, on the other hand, it is equally certain that it is impossible to obtain any approach to conformity in the cases of isolated families or small bodies of men. It is only in masses that the results are found to be unvarying.

In a single parish a whole street may be desolated; a single family may be exterminated; but these calamities, which fall so heavily upon the individual sufferers, are unknown to the great bulk of society. Of two men, the stronger and healthier dies; of two ships exposed to the

same gale, the crazy bark arrives safe, whilst her sturdy consort sinks beneath the tempest's shocks.

Each succeeding year witnesses a gradual diminution in the number of violent deaths, the efforts of science and the growth of knowledge giving to man a greater power over the climates; but we still hear of mines being blown up, despite the invention of the "Davy;" floating-belts and life-boats cannot prevent shipwrecks, or save more than a limited number; and all the art of the physician is often exerted in vain by the bedside of the young man, whilst the aged sufferer survives as if by miracle.

But with the whole population the duration of human life, which to ordinary observers appears so mysterious, is subject to laws as exact as those which regulate the recurrence of the seasons, or other natural events; and the number of deaths to be expected yearly at each particular age may be anticipated with such precision as to be entirely relied on.

The uniformity in the number of deaths is remarkable; the excess or diminution in one year rarely exceeds the average number. If we exclude the aged, the infants, and that portion of a population which is most exposed to the casual influence of disease and want, the variations from the mean number will be still less; and it is always found that the variation is on the side of longevity, it being a fact that for the last fifty years the rate of mortality has been very gradually, but progressively lessening.

Mr. Charles Babbage, in his treatise upon insurance, says, "Nothing is more proverbially uncertain than the duration of human life, when the maxim is applied to an individual; but there are few things less subject to fluctuation than the average duration of life in a multitude of individuals."

The number of births, marriages, and deaths, the relative proportions of the sexes, the number of ships cast away, of houses destroyed by fire, of suicides, one year with another, are found to be nearly equal during equal periods of time.

Thus it will be found that out of any large numbers of persons at a particular age the deaths during the ensuing year will be a certain number.

Take 10,000 persons of the age of fifty-two, we are as sure as we are of the times of eclipses, and the rising of the sun and moon, that the deaths among them next year will be about 150.

The average duration of life is now ascertained with such minute accuracy that it may be dealt with with more certainty than any other commodity, if we may thus express ourselves.

The fluctuations in corn and in gold, either of which is frequently referred to as the standard of value, have in the former amounted to cent. per cent., and in the latter to thirty to forty per cent. in the space of two or three years; whilst the difference between the mortality of the best and worst years of human life has never exceeded ten per cent.—that is, if out of a given number of certain ages the average of deaths is 100 in the year, no more than 105, or fewer than 95, will die in the given time.

“ In the year 1840-1 a million children (1,014,461) were born in England, and their births were registered. If the mortality should remain the same, the life table will enable us to follow this million, and to determine how many will be alive, and how many will die, through the several years of the next century, until they have all

returned to the earth from whence they came, and have been replaced by other generations destined to pursue the same road. To bring the observation within narrower limits, let us take 100,000 as the basis of the observation, and, from the proportions of the two sexes registered, it will be found that 51,274 of them were boys, 48,726 girls; and here it will be recollected that they are not Government annuitants, nor persons who have assured their lives, nor selected lives, nor the inhabitants of any particular town—but the children of all ranks and classes of Englishmen, some of them born in halls and palaces, and surrounded by all the luxuries and conveniences of life; others born in huts on the mountain side; in the cellars of ill-constructed cities; in lodging-houses, in cottages, farm-houses, or such dwellings as our towns afford. Let it be assumed that the 100,000 were all born on the same day, the 1st of January, 1841.

“Of the 100,000 children born, according to the supposition, on January 1st, 1841, only 85,369 were alive on January 1st, 1842. They were exactly a year old, and are placed against the year ‘1’ of the table; 14,631 perished in the first year, the fourth part of them in the first month of life. This is a smaller proportion of deaths than people have been led to suppose occur in the first year; but the facts leave it undoubted that this number of children survived in 1841, out of 100,000 born. On January 1st, 1843, the survivors were two years old, and in number 80,102; 5,267 died in the second year. On January 1st, 1846, the fifth year of age will be attained, and there will be 74,201 living. In the first five years, therefore, 25,790 of the 100,000 born died during this period, when they were at home, and under the mother, and en-

countered the contagious diseases which beset the beginning of life; their safety depended very much upon the power of the parents to supply them with food and raiment; upon the mother's watchfulness and cleanliness; upon the air they were doomed to respire in imprisoned courts and alleys, or in the fresh open atmosphere of healthy country districts. During the next five years, when they have left home, and when, as it appears from the Parliamentary returns, great numbers pass part of their day at school, the mortality becomes less considerable; 70,612 are alive at the age of ten; and from the age of ten to fifteen, when those 'who laboured with their hands' begin to follow the plough—enter the factory—or descend the mine,—the loss of life remains small; 61,627 will live to the age of fifteen. At this age the loss of life among girls is greater than the loss of life among boys, and it continues so for the next five years, when both sexes are more detached from the care of their parents, and the majority pursue the professions or trades by which they afterwards gain a livelihood. The mortality appears to increase rather rapidly from twelve to fifteen, and then at a slow, regular rate from fifteen to fifty-five: 66,059 attain the age of twenty. It was observed that 51,274 boys were born alive to 48,726 girls, but the mortality in infancy is greater among boys than girls; so that 31,951 males attain the age of twenty-five, and 31,623 females attain the age of twenty-four. This is about the average age of marriage in England, and the number of the two sexes is then nearly equal. About four-fifths of the males who attain the age of manhood marry; the proportion of women who marry being the same. It might have been supposed that

the peculiar danger which women encounter at this age increases their mortality; it does so, but less than the mortality of males is increased; 53,301 of the 100,000 persons born attain the age of forty-five—namely, 25,311 men, and 24,990 women. The chance of living from twenty-five to forty-five is rather in favour of English women. The violent deaths of men, in rivers, and the sea coasts, in mines, in the streets, in travelling, in their dangerous occupations; the mental agitations and anxieties, terminating unhappily sometimes in suicide; the accumulation of workmen in ill-ventilated shops, or the service in unhealthy climates, counterbalances the dangers and sorrows of child-bearing. At the age of fifty-five this generation will have given birth to and brought up the generation by which it is to be succeeded; a more rapid rate of mortality will then set in, and more than a thousand die every year; yet 37,996 will be alive at the age of sixty, and 24,531 attain the age of seventy (11,823 men, and 12,708 women—being less than that of men after fifty-five). The mental faculties, ripened and developed by experience, will not protect the frame from the accelerated and insidious progress of decay; the toil of the labourer, the wear and tear of the artisan, the exhausting passions, the struggles and strains of intellect, and, more than all these, the natural falling off of vitality, will reduce the numbers to 9,398 by the age of eighty. Here we may pause for a moment. It would formerly have been considered a rash prediction, in a matter so uncertain as human life, to pretend to assert that 9,000 of the children born in 1841 would be alive in 1921; such an announcement would have been received with as much incredulity as Halley's predictions of the return of the comet after the lapse of seventy-seven years.

What knew Halley of the vast realms of æther in which that comet disappeared? Upon what grounds did he dare to expect its re-appearance from the distant regions of the heavens? Halley believed in the constancy of the laws of Nature; hence he ventured, from an observation of parts of the comet's course, to calculate the time in which the whole would be described, and it will shortly be proved that the experience of a century has verified quite as remarkable predictions of the duration of human generations; so that, although we little know the labours, the privations, the happiness or misery, the calms or tempests, which are prepared for the next generation of Englishmen, we entertain little doubt that about 9,000 of 100,000 of them will be found alive at the distant census in 1921. After the age of eighty the observations grow uncertain; but if we admit their accuracy, 1,140 will attain the age of ninety; 16 will be centenarians; and of the 100,000, 1 man and 1 woman, like the lingering barks of an innumerable convoy, will reach their distant haven in one hundred and five years, and die in 1945." *

The statement of the facts so eloquently given in the above passage will have the effect of directing the attention of persons to the study of the great science of statistics.

These are the materials, or data, which constitute the basis on which calculations relating to the probabilities of life are founded. When the calculations are arranged under their respective heads, they are technically termed tables of mortality, meaning thereby that they exhibit expectation or probable duration of life at any given age.

* Fifth Annual Report of the Registrar-General, 1843.

By the term probability or expectation of life is meant an average amount of existence which it is supposed will be possessed by a certain number of persons of a given age.

All the computations now made to regulate the values of annuities and assurances on lives are founded upon observations of this law of nature, whereby to determine the amount which an individual should pay for the protection of his property from fire or shipwreck, or for the securing of a certain sum to be paid to his surviving relatives at his death.

THE DIFFERENT TABLES OF MORTALITY.

Hitherto no observations have been made from which the law of mortality may be correctly determined, except

1. Those of Kersseboom in Holland;
2. De Parcieux, in France;
3. The Swedish;
4. Dr. Heysham, at Carlisle.

Those of Kersseboom and De Parcieux were made only with reference to select classes of the people; the Swedish are incomparably the most numerous and extensive; but Dr. Heysham's will, we believe, be found to be best authenticated, and most correct.

The first attempt to apply practically the law of probabilities to human life was made in France on the system of Tontines—in which the advantage was gained by the longest liver—with Morgen, Necker, De Parcieux, Duvillord, and others, most able calculators, in France; and with tables showing the mortality amongst the monks and nuns, and amongst the general population at Montpellier.

The first tables of the duration of human life were produced towards the end of the seventeenth century by Sir William Petty, in a series of observations on the bills of mortality of London and Dublin.

The calculations from these tables were inaccurate, from the documents being imperfect, not stating the exact number of the population among whom the deaths were ascertained, with the ages and sexes of the deceased, and no note being taken of the visits of strangers to both cities; the consequence was, that no correct data could

then be established. The first table of mortality which had any pretension to accuracy and utility was deduced from a series of five annual tables of births and deaths, with the ages and sexes, compiled from registers during the years of 1687 to 1691, by Dr. Newman, in the city of Breslau, in Silesia.

From these registers Dr. Edmund Halley constructed the first tolerably correct tables for ascertaining the true value of life annuities, which had been previously calculated from hypothetical and uncertain data.

These, however, were discovered to be erroneous, but nevertheless sufficiently accurate to illustrate the relative duration of life and its consequent value. Dr. Halley shows, from the Breslau tables, how the price paid for the assurance of life might be justly and scientifically regulated, and pointed out the real difference between assuring the life of a man aged twenty, and that of another aged fifty; proving it to be 100 to 1 that the former, and little more than 30 to 1 that the latter, would not die in a year.

Considerable improvement of Dr. Halley's tables was made by Mr. Abraham de Moivre, in his tract on "Annuities on Lives," in 1724; by Mr. Thomas Simpson, in his "Doctrine of Annuities and Reversions" in 1742; by De Parcieux, in his excellent "Essai sur les Probabilités de la Durée de la Vie Humaine," in 1746.

Though the methods adopted in these works were useful at the period when they were published, and proved important acquisitions to the science of Life Assurance and Annuities, their general deductions were still very remote from the truth.

Dr. Richard Price, in his celebrated "Observations on

Reversionary Payments," published in 1769, directed the public attention to this species of inquiry, and treated the subject in a more general and perspicuous manner, constructed tables of the probabilities and expectation of life deduced from the burial registers of Norwich, Chester, and Northampton, from 1741 to 1780. He took 11,650 individuals whose births and deaths were recorded in the town of Northampton, and found that in the first year 3,000 died; in the second, 1,367; in the third, 502; in the fourth, 335; in the fifth, 197; and so on, till the last man died at 96.

The table usually called the Northampton table was until within the last quarter of a century exclusively used by the Assurance Offices, although the rate of mortality shown by it has long been known to be above the general average of the mortality in England. The result has been on the one hand an enormous and useless accumulation of wealth in the Equitable Society; and an enormous loss, on the other hand, in the Government Life Annuity Office—a loss amounting, it is said, to millions.

"The Northampton tables are, of any which possess the slightest reputation, those least calculated to represent the probable rate of mortality amongst a body of assurers. They are tables which an experience of thirty years has proved to be erroneous throughout a large part, in the proportion of two to one."* It will surprise those who are uninformed on the subject to be told that, notwithstanding the known inaccuracy of these tables, nearly all the old Assurance Offices adopt them; eighteen openly avow the fact, and others do not state what tables are

* Babbage on Life Assurance.

used, but the premiums they require are equally unfavourable to the public.

Mr. Baily, in 1810, made the following judicious observations on Life Assurance:—"The tables most used in this country at present are those which were formed by Dr. Price, from the bills of mortality at Northampton; but they derive their importance principally from those numerous tables of the value of annuities on single and joint lives which are computed therefrom, and which afford great facility to the solution of the various cases connected with this subject. In every point of view it must appear extremely incorrect to take the rate of mortality in one particular as a criterion for that of the whole country. The observations ought to be made on the kingdom at large, in the same manner as in Sweden; more particularly as in the real business of life the calculations should be general and uniform, and adapted to persons in every situation. But till the Legislature thinks proper to adopt some efficient plan for furnishing these data, we must rest contented with the laudable exertions of public-spirited individuals, and avail ourselves of the best light which they afford us on this subject."

The tables of mortality forming the basis of Life Assurance calculation are, the Northampton, the Carlisle, the Government (Finlaison), and the Equitable; but a new rate of mortality, founded on the average of seventeen offices, has lately been prepared, under a Committee of Actuaries.

The table of mortality now generally used in England for the calculation of Life Assurances and Annuities, is named the Carlisle table, the most accurate table of mortality existing; it was constructed by Mr. Joshua

Milne, from observations made by Dr. Heysham, at Carlisle, during the period of nine years, from 1779 to 1787.

It gives a lower estimate of the various chances of life at all ages than the Northampton table. From the very superior accuracy of the census, it exhibited a result more favourable by about 30 per cent. to young, and of 20 and 25 per cent. on middle-age lives; but it also exhibited such an extraordinary expectation of extended life to the very old—making for example, that expectation to a person of 92 greater by a small fraction than to a person of 91, and in each case rather more than three years and a-quarter, and giving to a person of 102 an expectation of two years and a-quarter more—that great doubts were entertained by Mr. Morgan, Actuary of the Equitable, of its general accuracy. It was nevertheless, nearly correct, the more favourable result arising from the more accurate census, rather than from the superior salubrity of Carlisle, as compared with Northampton. But the protracted vigour of extreme old age is of such rare occurrence that it would be dangerous to found money contracts upon such calculations.

Experience has found on a minute examination of the mortality which has occurred among persons assured by seventeen of the oldest London Offices, that the Carlisle table gives the rate of mortality at every age with extraordinary accuracy throughout most parts of England.

In the Report of the Committee of the House of Commons from 1825 to 1827, on the laws relating to Friendly Societies, the comparative merits of the Northampton and Carlisle tables are considered, and the testimony of the several actuaries confirms the accuracy of the Carlisle over the Northampton table of mortality, as also the obser-

vations recently published by Mr. Finlaison, and Mr. Arthur Morgan.

Some other estimates of the duration of human life have been formed upon averages of lives, deduced from Government annuitants, and Tontine nominees. The principal tables of this description are those drawn up by M. De Parcieux, from the observations on the decrements of life among the members of the French Tontines, which are particularly deserving of attention, as constituting the first separate tables of mortality for the lives of the two sexes exhibiting the greater longevity in females; those of William Kersseboom, from similar observations among the annuitants of Holland; that by Mr. Charles Babbage, from the statement of Mr. Morgan, derived from the registers of the Equitable Society; that by Mr. Griffiths Davies, Actuary of the Guardian Assurance Office, from the same materials; and that by Mr. John Finlaison, Actuary to the National Debt Office, from the Government annuitants and Tontines in England and Ireland, computed for the Friendly Societies' Committee in the House of Commons.

Having thus shown the gradual improvement of, and the comparative rate of mortality, as exhibited by different tables, we shall now direct the attention of the reader to the number of persons living at different ages of human existence.

Tables of mortality, showing the number of persons living at the end of every year out of 1,000 born at the same time, according to the following table of mortality:—

Age.	Breslau. Dr. Halley.	Northamp- ton. Dr. Price.	Carlisle. Dr. Heysham.	Sweden. Dr. Wargentin.	Age.	Breslau. Dr. Halley.	Northamp- ton. Dr. Price.	Carlisle. Dr. Heysham.	Sweden. Dr. Wargentin.
0	1,000	1,000	1,000	1,000	52	250	221	428	267
1	769	743	846	790	53	241	224	421	258
2	658	635	778	730	54	232	217	414	249
3	614	582	727	695	55	224	210	407	240
4	585	552	700	671	56	216	203	400	231
5	563	536	680	656	57	209	196	392	222
6	546	521	668	644	58	201	189	384	212
7	532	509	659	634	59	193	182	375	203
8	523	499	654	625	60	186	175	364	193
9	515	492	649	618	61	178	168	352	182
10	508	487	646	611	62	170	161	340	171
11	502	483	643	606	63	163	154	327	159
12	497	478	640	602	64	155	147	314	147
13	492	474	637	597	65	147	140	302	135
14	488	470	633	594	66	140	133	289	124
15	483	465	630	590	67	132	126	277	112
16	479	461	626	586	68	124	119	265	100
17	474	457	622	582	69	117	113	252	87
18	470	452	618	578	70	109	106	240	75
19	465	446	613	574	71	101	99	228	62
20	461	441	609	570	72	93	92	214	49
21	456	434	605	565	73	84	85	200	35
22	451	428	600	560	74	77	78	184	21
23	446	421	596	555	75	69	71	167	106
24	441	415	592	551	76	61	65	151	96
25	436	409	588	546	77	53	58	136	85
26	431	402	584	541	78	45	52	121	74
27	426	396	579	535	79	38	46	108	65
28	421	389	575	530	80	32	40	96	56
29	415	383	570	525	81	26	35	84	47
30	409	376	564	519	82	22	30	72	38
31	403	370	558	513	83	18	25	62	31
32	397	364	553	507	84	15	20	53	24
33	391	357	547	501	85	12	16	44	19
34	384	351	542	496	86	9	12	37	14
35	377	344	536	488	87	6	9	30	11
36	370	338	531	482	88	4	7	23	8
37	363	331	525	477	89	3	5	18	6
38	356	325	519	471	90	1	4	14	5
39	349	318	514	465	91	0	3	10	3
40	342	312	507	459	92	0	2	7	2
41	335	305	501	453	93	0	1	5	1
42	328	299	494	445	94	0	1	4	0
43	321	292	487	437	95	0	0	3	0
44	314	285	480	430	96	0	0	2	0
45	307	279	473	422	97	0	0	2	0
46	299	272	466	414	98	0	0	1	0
47	291	265	459	407	99	0	0	1	0
48	283	259	452	400	100	0	0	1	0
49	275	252	445	392	101	0	0	1	0
50	267	245	440	385	102	0	0	0	0
51	259	238	434	376	103	0	0	0	0

From a reference to the Carlisle table it will be seen that 154 children in every 1,000 die before they are twelve months old, and that only three out of four survive their

third year. At the age of 41 the balance between life and death seems equal, as the number of survivors is then reduced to one-half; at 69 one in four only survives, and at 102 the whole have been swept away. Looking at the ages in which the number of deaths are fewest, we find that—

From 9 to 15	the average yearly mortality is 3	in 1,000
„ 15 to 28	„ „	4 in 1,000
„ 28 to 39	„ „	5½ in 1,000
„ 39 to 56	„ „	7 in 1,000

The following tables show the expectation, or mean duration of life for every fifth year of age (from 10 to 85 inclusive) according to the Northampton table, the Carlisle table, Mr. Arthur Morgan's table of the Equitable experience, the Seventeen Offices' table, and Mr. Finlaison's table, calculated for the Friendly Societies' Committee of the House of Commons in 1825.

Expectation, or mean duration of life, according to each of these tables, is as follows:—

Age	North- ampton.	Carlisle	Govern- ment (Finlai- son.)	Equit- able Society.	Seven- teen Offices.	Age	North- ampton.	Carlisle	Govern- ment (Finlai- son.)	Equit- able Society.	Seven- teen Offices.
	Y. D.	Y. D.	Y. D.	Y. D.	Y. D.		Y. D.	Y. D.	Y. D.	Y. D.	Y. D.
10	39 78.	48 82	45 57	48 83	48 36	50	17 99	21 11	20 30	20 36	20 18
15	36 51	45 00	41 76	44 81	44 96	55	15 58	17 58	17 15	16 99	16 86
20	33 43	41 46	38 39	41 67	41 49	60	13 21	14 34	14 39	13 91	13 77
25	30 85	37 86	35 90	38 12	37 89	65	10 88	11 79	16 63	12 35	10 97
30	28 27	34 34	33 17	34 33	34 43	70	8 60	9 18	9 22	9 64	8 54
35	25 68	31 00	30 17	30 93	30 87	75	6 54	7 01	7 12	7 52	6 48
40	23 08	27 61	27 02	27 40	27 28	80	4 75	5 51	4 94	5 38	4 78
45	20 52	24 46	23 75	23 87	23 69	85	3 37	4 12	3 12	3 73	3 36

MORTALITY OF DISEASE.

The following statements, derived chiefly from the second, third, and fourth Reports of the Registrar-General, and from Mr. F. G. P. Neison, refer exclusively to ages between 15 and 60 years, the period most important to an Assurance Office.

The deaths in the Metropolis from 1840 to 1842 were from all causes 30,518, and from consumption alone, 10,608, showing that more than one-third of the total deaths of that period of life takes place from the prevalence of a single disease. With respect to the existence of other diseases, such as asthma, dropsy, diseases of the head, heart, &c., more than one-half of the whole population would, on medical examination, be refused admission into an Assurance Office.

In Birmingham, Liverpool, and Manchester the deaths from all causes per annum are about 5,023; while those from consumption are 1,988, more than one-third of the total deaths. In six of the largest and most populous towns of Scotland the deaths in a given period from all causes amounted to 23,078; those from consumption alone to 6,359; and from six important diseases, 9,754; the latter forming more than 42 per cent. of the deaths from all causes. The returns from the City of Glasgow for 1836-40 show that the deaths in that period from all causes were 14,107; from consumption, 4,087; and from five diseases, 6,423; being more than 45 per cent. of the total deaths.

The mortality of the general population has frequently been referred to as an example that the fluctuation of the

average duration of life seldom varies from that expected by the tables on which its calculations are founded, and experience proves there is more certainty with respect to diseased lives than with the general population. As this fact is of vital importance to the interests of society, and deserves to be considered, we will select the deaths from consumption simply.

The fluctuation of mortality from all causes in Glasgow is as high as 45 per cent.; while the deaths from consumption in the Metropolis are only 9 per cent., or one-fifth of the total deaths. In Manchester, Liverpool, and Birmingham the fluctuation does not exceed 3 per cent. Among nine diseases of the Metropolis, including asthma, dropsy, rheumatism, disease of the liver, of the heart, of the nervous system, &c., the fluctuation was only $7\frac{1}{2}$ per cent.; and in five diseases in a different district, the fluctuation was about 7 per cent.; while among eleven in another locality, the fluctuation did not exceed 6.2 per cent.; and taking the principal towns in England, including Manchester, Liverpool, Birmingham, Leeds, Sheffield, &c., the fluctuation over eleven of the more important diseases was 6.4 per cent.

EXPECTATION OF DISEASED LIVES.

The value of life generally is much greater in the country districts than in large cities, but of those who suffer from disease the value of life is nearly equal.

The expectation of life at the age of 30 in the rural districts is 36·7 years; in cities (Glasgow), 27·6 years—difference nearly 33 per cent.; but take the case of persons of that age who will ultimately die of consumption, and their expectation of life, in the counties of Essex, Suffolk, and Norfolk, will be found to be 14·5; in cities (Glasgow) 14·4; and in the Metropolis, Manchester, and Birmingham, 13·9—difference, 0·17 per cent. (or 1·57 per cent.) It appears that while the difference between the country and town life is about 33 per cent., in diseases (consumption) the results are almost uniform.

The preceding remarks apply equally to other diseases, which have been investigated; hence it appears that the fluctuation of the law of mortality being confined within a very narrow limit, must consequently be much less than among the general population, and that the risk of assuring diseased lives is to that of average lives as 9 to 45, or only one-fifth.

This result shows a remarkable uniformity in the law which determines the mortality of disease, and produces the conviction that it is as certain as that which regulates the general population; indeed, there seems to be nothing within the whole range of the doctrine of probabilities so well defined as diseased lives. It may be remarked that in applying the test of fluctuation of disease it has not been confined to one class of lives or place, but extended to the

principal towns in England and Scotland, as well as to many country districts in England. This has afforded the means of estimating the effects of localities and the sanitary condition on the duration of life.

RATE OF MORTALITY.

We now proceed to show the rate of mortality used for computations to regulate the value of Life Annuities and Assurances.

In the year of 1844, at the age of 32, the mortality of males for the whole of England and Wales was 1 in 95.

The mortality in England was 1 in 45 annually; in the Manchester Unity of Odd Fellows it was 1 in 106; and for all classes of friendly societies, at the age of 32, the mortality was 1 in 128; while for the rural districts it was 1 in 109; for the town districts, it was 1 in 110; and for the city districts it was 1 in 102.

The mortality in the British army is 49 in 1,000; that of men under 25 years of age amounts to 24 in 1,000; while among those above 40 years it is as high as 126 in 1,000.

Of the rate of mortality for the several counties of England on the average of the last fifty years, Cornwall has the advantage of being the most healthy county in England, the deaths there being fewer than in Wales, notwithstanding the many casualties occurring on its extensive sea coast and in its mines.

The greatest degree of longevity is found in the rural districts and villages, and the greatest mortality in those counties wherein manufactures are carried on, and in

which there are large towns. It appears that the most unhealthy town is Lancaster.

In addition to the foregoing facts it is found that out of 10,000 persons buried

In London	36	had reached 90;	2	to 100 years
England	89	„	4	„
Cornwall	137	„	6	„
Wales	211	„	13	„

The mean age of the people of England is 32, and the mean time which they will live is also 32.

In Austria the mean age is 29, and in Russia it is below 27.

In England husbands and wives marrying at the age of 25, on an average live 27 years; if the male be 40 and the female 30, the average is 21 years. In the former case, the widows survive their husbands 10 years, the widowers their wives 9 years; in the latter, the widows survive 13 years, the widowers live 5 years after the death of their wives.

The average duration of life is greater and the increase more rapid in England than in almost any foreign city or state in Europe. London stands with respect to Paris in the scale of health as 40 to 32; to Leghorn, as 40 to 35; to Naples, as 40 to 28½; to Rome, as 40 to 24; and to Vienna, as 40 to 22½. The yearly mortality in the latter city is nearly five per cent. of the whole population annually.*

* John Hogg, M.D., on "Health and Habits of the People," John Macrone, St. James's-square: 1837, p. 83.

The following table shows the rate of mortality in England as compared with some of the principal European states :—

England	1 in 45
France	1 in 42
Prussia	1 in 38
Austria	1 in 33
Netherlands	1 in 29
Russia	1 in 28

Such are the materials that exist for constructing tables to calculate the probable and average, or mean duration of ordinary existence, as well as for the various calculations of annuities and assurances on lives of different ages.

CHAPTER III.

RISE AND PROGRESS OF LIFE ASSURANCE.

WHEN we consider the wonderful effects which commerce has produced on the manners of men—when we observe that it tends to remove those prejudices which generate dissensions and animosities; that it unites mankind by the strongest of all ties, the desire of supplying mutual wants; and that it disposes them to peace and concord, by establishing in every community an order of men whose interest is to preserve public tranquillity, we are led to think that the history and progress of it would not only be amusing, but highly important and instructive to the inhabitants of every civilised society.

Such a work would be, in fact, the history of the intercourse and communication of mankind, and must necessarily abound in events the most interesting to every social being, but particularly to the people of this country, whose great importance in the eyes of Europe originated in commerce, and will endure as long only as attention continues to be paid to the commercial interests of the kingdom.

Insurance forms a very distinguished part of commerce, and therefore it cannot but be agreeable to the scholar, as well as to the statistic, to trace this branch of commerce to its source.

Insurance is a contract by which the insurer under-

takes, in consideration of a premium equivalent to the hazard incurred, to indemnify the person insured against certain perils or losses, or to pay him a certain sum on the occurrence of some particular event.

The utility of this species of contract in a commercial country is obvious, and has been noticed by very distinguished writers upon commercial affairs.

Insurance affords great security to the fortunes of private people, and by dividing amongst many that loss which would ruin an individual, makes it press lightly upon society. This security tends greatly to the advancement of commerce, because the risk of transporting and exporting being diminished, men will more easily be induced to engage in an extensive trade, and to join in hazardous enterprises, since a failure in the object will not be attended with those dreadful consequences to them and their families which must be the case in a country where insurances are unknown.

The origin of insurance, like that of many other customs which depend rather upon traditional than written evidence, and for the honour of inventing and introducing which rival nations contend, has occasioned much doubt amongst the writers upon commerce. Indeed, it is involved in so much obscurity, that after all the researches which have been made on the present occasion, any very satisfactory conclusion cannot be promised. One truth, however, is clear, that wherever foreign commerce was introduced, insurance must have followed as a necessary attendant, it being impossible to carry on any extensive trade without it. ✓

Some of these writers have ascribed the origin of this contract to Claudius Cæsar, the fifth Roman Emperor, on

account of a passage to be found in Suetonius; other respectable authorities have given the honour of it to the Rhodians; thus laying a foundation for the idea entertained by many, that insurance had obtained a place in most of the ancient codes of commerce.

In the French Book, entitled "Le Guidon," published in 1661, we find it mentioned as a contract perfectly well known at that time in other countries. The author of that book, however, tells us, in the same passage, that it was a species of contract wholly forbidden in France,* as being repugnant to good morals, and as opening a door to a variety of frauds and abuses. Such, indeed, the law of France continues at this day; and at present Life Assurance in that country is only tolerated, and does not exist to any considerable extent.

The Lombards came into England in the thirteenth century, and it is universally agreed that whatever may have been the origin of insurances, they were introduced into England by that active and industrious people.

As a legal and commercial system, insurance of ships is to be traced to the early part of the sixteenth century, from which time it appears to have advanced in Spain, Italy, and Holland. In England, the first regulations concerning it are referred back to the year of 1661.

But it is evident that the practice of granting assurances upon lives, having for its object the securing of sums of money, payable at death, by annual contributions during life, must have been uncertain until the probable dura-

* In 1681 it was forbidden by ordinance as "contrary to morality; it being an offence against public decency to set a price upon the life of a freeman, which is above all valuation."

tion of life at every age was ascertained, according to scientific principles.

The first scheme of importance, and which stands forth as the foundation of Life Assurance, was the system of *Tontines*, invented by Lorenzo Tonti, or Tontine, a Neapolitan, in 1653. The plan was this:—

A certain number of persons clubbed together a specified sum (without reference to age or sex) annually, and at the expiration of each year the interest of this fund was divided amongst the subscribers who were living; and so on, from year to year, until the last survivor received the whole of the interest.

This novel scheme had all the appearance of a profitable investment, until an inquiry was instituted to ascertain what became of the principal sum subscribed, as the interest of the fund only was awarded. This was fatal to the invention. When this glaring error was brought to light, a limited number of years was fixed for the continuation of the Tontine, and the amount originally subscribed received by the member who survived. At the expiration of that time, this plan, from its great inequality, did not meet with general approbation, as many died without receiving any advantage whatever for their subscriptions; and others, longer lived, received, in many cases, nearly three hundred times the amount advanced.

In 1689, the last survivor of a Tontine in France was a widow, who at the period of her death, at the age of ninety-six, enjoyed an income of 73,500 livres (£3,062 10s.) for her original subscription of 300 livres, of the value in British currency of only £12 10s.

The present system of Life Assurance was introduced about the middle of the seventeenth century.

The first Life Society established was the Amicable,

incorporated by royal charter, in the reign of Queen Anne, in 1706, the principle of which was the mutual. So little was known of the value of human life at different ages, that the business consisted merely in receiving annual subscriptions of the same amount from members of all ages, which were invested at interest, and the profits, if any, after payment of losses, were added to the policies of those who died within the current year, and if the nett profit were £1,000, and ten members died, their representatives received, in addition to the sum assured, £100 each; and if only one died, his estate acquired the £1,000.

The ages of members were between twelve and forty-five, and the premiums were the same on all ages—viz., entrance, £7 10s. per share; annual premium, £5.

The London Union, 1741, the Royal Exchange, and the London Assurance, in 1720 and 1721, were next, proprietaries. The Equitable was established in 1762, and the parties insuring paid £5 per cent. without reference to age; but it made little progress till the year 1782, when the large premiums were reduced, and a new arrangement, based upon the Northampton tables, with an addition of 15 per cent. was adopted. This society, which commenced with a few humble individuals, during the first few years of its establishment languished in obscurity with a small capital, and a still more insignificant income; but in the progress of this gigantic institution, it was removed from a state of indigence to that of opulence, and possessed in 1815 a stock or fund of twelve millions.

Upon examining the progress of Life Assurance in Europe, we find those countries which rank highest in civilisation, and are noted for prudence and forethought, are those which have most readily availed themselves of

its benefits; as, for instance, England, Holland, and Scotland: commercially speaking, France takes a rank lower than England. In 1841 the population in this country, including Wales, was about fifteen millions. In France it exceeded thirty-four millions; yet in the former there were upwards of a hundred Life Offices, and in the latter only three.

The following statement furnishes the clearest view of the advance of insurance to the present time, exhibiting remarkable results.

The number of Insurance Offices established from the commencement in 1706, until the end of 1847, showing the number founded in each year:—

1706 ... One.	1810 ... One.	1835 ... Three.
1714 ... One.	1815 ... One.	1836 ... Five.
1720 ... One.	1819 ... One.	1837 ... Seven.
1721 ... One.	1820 ... Two.	1838 ... Seven.
1762 ... One.	1821 ... One.	1839 ... Three.
1792 ... One.	1823 ... Four.	1840 ... Six.
1797 ... One.	1824 ... Seven.	1841 ... Four.
1803 ... One.	1825 ... Four.	1842 ... Three.
1805 ... One.	1826 ... Three.	1843 ... Four.
1806 ... Three.	1831 ... One.	1844 ... Nine.
1807 ... Three.	1833 ... Two.	1845 ... Thirteen.
1808 ... Two.	1834 ... Five.	1846 ... Five.

In 1820 there were only twenty Insurance Offices existing in the United Kingdom. In 1830 their number was exactly doubled, being forty. In the next ten years, or in 1840, they had again just doubled—they amounted to eighty. Singular as it may seem, the increase has since proceeded in a like decennially progressive ratio (doubling every ten years), for, in the five years since 1840, just forty new offices have been added to the number then existing; making one hundred and twenty established at the close of 1845.

Ten other Life Offices have been established from that

period to the end of 1847; so that there are about 130 Insurance Offices in Great Britain and Ireland, which may be stated thus:—53 established prior to 1835, and 77 between 1835 and 1847.

It appears that of about fifty-four proprietary Assurance Companies, the shares in about forty of them are, notwithstanding the depressed state of the money-market, at various premiums; several as high as £30, with £2 paid; others as low as £4 7s. 6d. upon the same amount (£2) paid up. There are about six at par; about four at small discount; and it is unknown to which of these classes the remainder belong,—probably from the transfer-books being closed.

Of these fifty-four proprietary companies the highest amount paid up is £55 on £250 shares, or nearly one-fourth; the lowest 10s. on £20 shares, or one-fortieth.

The following table, derived from twelve different companies, will exemplify the value of this mode of investment, and show that excellent dividends have been paid on the capital:—

OFFICES.	Number of Shares.	Amount of each Share.	Amount paid up pr. Share.	Present price per Share.	Profit per Cent.	Average Sum paid on 20% Share.
		£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Albion	2,000	500	50 0 0	75 0 0	50 0 0	2 0 0
Alliance Life.....	50,000	100	11 0 0	17 10 0	59 0 0	2 2 0
Atlas Life	24,000	50	5 6 8	14 2 6	160 0 0	1 19 0
British Commercial.....	12,000	50	5 0 0	5 3 0	17 10 0	2 0 0
Clerical, Medical, & General	5,000	100	10 0 0	20 0 0	100 0 0	2 0 0
Crown.....		50	5 0 0	11 0 0	120 0 0	2 0 0
Eagle	20,000	50	5 0 0	5 3 0	17 10 0	2 0 0
Imperial Life	7,500	100	10 0 0	14 10 0	45 0 0	2 0 0
Law Life	10,000	100	10 0 0	45 0 0	250 0 0	2 0 0
Legal and General	20,000	50	2 0 0	4 10 0	125 0 0	0 16 0
Medical, Invalid, & General.	10,000	50	2 0 0	2 10 0	25 0 0	0 16 0
Rock	200,000	5	0 10 0	4 5 0	750 0 0	2 0 0

Notwithstanding the adoption of Life Assurance in this country so early as the reign of Queen Anne, its subse-

quent extension and progress did not take place till the commencement of the present century; when the business of Life Assurance was carried on to a great extent.

The progress is connected with the unimpeded advance of the population during the last half century. The middle classes in the United Kingdom, who form the bulk of Life Assurers, have multiplied at a far more rapid rate than the ranks above or below them.

Besides this tendency to expansion, they are also increased by the advance of individuals from the labouring classes, and the adoption by the junior branches of the aristocratic families of enterprising and speculative occupations, which have a tendency to enlarge the field for Life Offices.

The progress which the principle has made within the last twenty-five years, in the peculiar facilities which the system affords for the promotion and advancement of sectional interests, is a marked feature in the history of the Life Offices.

Almost every separate industrial interest, and every professional occupation of any importance, has now its own Life Office; or some office has assumed the name of such class interest.

The divisions and subdivisions of the Life Offices to represent particular occupations or professions operate advantageously.

By appealing to class feelings or prejudices, and by exciting the class emulation, many persons are stimulated to insure their lives, who might otherwise never have been prompted to take the wise and prudent step at all; while others, who though fully alive to its advantages, and fully

intending to embrace them, yet go on hesitating and considering before they embark therein, will probably be induced to act promptly by the immediate influence of that class rivalry and class affection.

Thus the field for assurance is actually enlarged considerably by that very feature or distinction in the offices, and in this light alone such nominal divisions and distinctions operate both usefully and advantageously.

DIFFERENT SYSTEMS OF ASSURANCE.

In the former chapters we have traced the progress of Life Assurance from the first rude and speculative attempts, commencing in the reign of Queen Anne, to the state of precision and accuracy to which the labours of Morgan, Baily, Milne, Babbage, and others have brought it.

We have next to examine the different systems under which Life Assurance is now carried on to such enormous extent in England.

The associations for Life Assurance are divided into three classes—namely, Proprietary Companies, Mixed Companies, and Mutual Assurance Societies.

PROPRIETARY COMPANIES.

The first class may be termed strictly Proprietary, as regulated by a legally-defined and recognised responsibility, and makes the business of Life Assurance an ordinary trading concern, selling assurances as a merchant sells his goods, and taking upon themselves the loss and profit which would arise from an increased or diminished rate of mortality amongst the assured lives.

The profits of the business are divided among the shareholders, who subscribe the requisite capital, and are responsible to the full amount of their shares, but not beyond it, for the payment of all claims on policies. The assured have no participation in the profits.

MIXED COMPANIES.

The second class embraces two principles—namely, the Proprietary, or Non-Participating one, where the policies are fixed and definite in amount; and the participating plan, where the policies of the assured are increased by adding to them a certain portion of the profits of the business. These mixed offices are, in fact, only a modification of the proprietary system, and all the objections urged against proprietary companies may fairly be applied to them. Firstly, there is a permanent capital paid up for providing the payment of all policies; secondly, at stated periods a certain proportion of the profits is divided among the qualified policy-holders.

It is evident, however, that these societies have not failed to discover the evils which spring from the constitution of a purely proprietary society, and they endeavour in some degree to avert them by the adoption of a portion of the principle of a mutual society.

The general history of proprietary and mixed Assurance Societies demonstrates that their continued prosperity cannot arise from any other cause than their receiving from the public a rate of premiums which not only frees the company from any risk of loss, and so does not require the use of capital, but leaves a profit to the shareholders; whether the proprietary or non-participating method of assurance is carried on separately or in connexion with other plans, the injustice of it remains in all its original force. It is obvious that if these societies have made profits from their rates, then, with similar good management, they should continue to do so, and the protection of capital is not required. In that case the

assured should not be content with a portion of the profits,—they should not acquiesce in the impropriety of handing over the remainder of the profits to parties who incur no risks, when there is a certainty of a portion of the premiums to be paid during their whole lives being annually appropriated to the benefit of proprietors unknown to them. How is it that sensible men will, without any reason or necessity, make such a sacrifice when there exist around them institutions of undoubted stability, in which the profits on the whole premiums will be preserved for their benefit? The mixed companies cannot even avoid approving of such a course; for they venture to appeal to public credulity, and are bold enough to say that, even while they take a portion of the premiums for division among the proprietors, they give the assured all the advantages of mutual societies.

MUTUAL SOCIETIES.

The third class consists of the offices in which there are no shareholders, and therefore no subscribed capital. The profits realised by these associations are divided exclusively among the policy holders.

“A mutual society is one in which the members stand equally related to each other, and constitute the company. In such a company no capital is, generally speaking, raised at the outset, except, perhaps, a small sum for necessary expenses at starting. The risk, even at the commencement, is not great in character, and is small in amount, and diminishes so much faster than the amount increases that it may safely be said there is nothing in the commercial world approaching, even re-

motely, to the security of a well-established and prudently-managed mutual Assurance Society.*" The essential distinction between mutual Assurance Societies and purely proprietary companies consists in this, that in the former the policy holders are each assurers as well as assured, and consequently are liable to all the losses, as well as entitled to all the profits of the association; whereas the latter are mere trading companies selling assurances to the policy holders. We will suppose that ten thousand persons at the age of 52 associate for the purpose of insuring to the heirs of those who died within a year each £1,000; it would be necessary that each should contribute as much as would make up the sum of £150,000, or a thousand times £150 (the number of persons that may be expected to die)—that is to say, each of the ten thousand persons would be required to pay in £15, with a small additional allowance for the expense of transacting the business. The resulting sum of £150,000 nett gives the representatives of each deceased party the desired £1,000; and if a larger number of persons at certain ages should be determined on—say between 15 and 60—paying each according to his age, and the sum proposed to be insured, we should have what is termed a mutual society. Generally men do not insure for one year only, but for the whole of life; for which reason an average is struck, and they commence paying at a rate which will continue the same to the end; the excess of payment in early years making up for its smallness in those at the close of life. Such being the practice, Life Assurance Societies necessarily accumulate large funds, which

* Professor De Morgan.

they increase by placing at interest in safe investments. In order for such surplus fund to be obtained, the early members must necessarily contribute in a much higher degree than the subsequent members to its accumulation; indeed, there can be no doubt that the very large surplus capital possessed by some of the offices has been derived from the high rates of premium paid by the early members.

Thus it appears that a mutual Assurance Society may be a desirable object for policy holders in its maturity, but the reverse in its infancy, as a larger amount of contribution in the latter case is required than would, under ordinary circumstances, be necessary to provide for the claims of the assured.

Mutual societies, however, are based on the only plan of Life Assurance which the public are interested in supporting. The experience of nearly a century derived from upwards of a hundred Life Companies confirms the conclusion at which scientific and mathematical investigation has arrived, that mutual assurance is the most advantageous to the assured.

The annual reports of established offices, such as the Equitable, which is purely mutual, the Globe, which gives no part of the profits to the assured, and the semi-proprietary companies, who give the assured a portion of the profits, show that while in all mutual offices the assured's policies have increased in value, in proprietary companies the surplus premiums have been applied to increase the shares of the proprietors.

The old policies of the Equitable have increased nearly 600 per cent, while those of the same in proprietary companies represent only the original sum assured.

A company of mutual assurers certainly appears to

be the most desirable for assuring life, although one objection is urged—namely, the want of capital to answer the demands of the society before sufficient funds accrue from the profits. But to meet this necessity, most mutual societies provide as a security to policyholders a guarantee fund.

The projectors of the London Life Association subscribed a guarantee capital of £1,500 Bank Stock, until the funds of the society were sufficiently large to enable them to withdraw it.

At that time this advance of capital was considered to be attended with positive risk, although forty years' longer experience of all the Assurance Companies has now proved that the capital required is merely nominal, and that the annual premiums have been found quite sufficient to answer all the demands made on the funds of the society; yet even now few would venture to assure their lives at a new office, however respectably and ably conducted, without some capital to commence with beyond the collective premiums subscribed, or without a responsible guarantee that the sum assured would be paid in the event of their death. This guarantee must, therefore, be obtained in the formation of a new society; and it is but reasonable to suppose that those who contribute it will expect some equivalent advantage.

Amongst the many improvements recently introduced into mutual societies, is the principle of combining the security of a temporary guarantee fund, to be paid off when the profits shall equal the capital advanced, with a bonus as remuneration for the advances made and risk incurred; thereby relieving the assured from all possible loss and responsibility, so often urged as an objection

against mutual societies, instead of attempting to give the assured a full and complete guarantee by an ample capital contributed for that purpose, or a capital raised by advanced premiums, from 15 to 20 and 25 per cent. higher than the average, on the ground of providing for possible contingencies.

This plan of investing and accumulating an equivalent portion of the profits to serve as a reserve fund against extraordinary and unexpected claims appears to be better calculated to promote the interests of the assured than that of an office in which capital is reserved from the profits by increased rates of premiums. It might be easily shown that the loss arising from this sacrifice of profits is moderate, especially to older lives, when compared with that incurred by assuring in offices making a permanent charge on the premiums for management, &c.

Thus, in a mutual office, in which the assured have no protection against unexpected claims, the premium for assuring £1,000 at the age of 40 is £37 15s.; while the sum required to assure £1,000 in an office providing a temporary reserve fund is £32 10s.

This system is not only a guarantee for the payment of claims, but also for the good management of the office, and is the best and cheapest security to the assured, considering what the use of capital really is; and the safety of starting with a moderate reserve fund, with the power of paying off such capital as the business of the office increases. By this system there will also be always a sufficient sum reserved as a security against unexpected claims; and the office will not be over-burthened with an enormous permanent capital, as in proprietary and mixed

offices, or offices with no reserve fund, charging high rates of premium as a substitute for such capital, and the only effect of which is to deprive the assured of their fair share of profits.

The proportion of mutual to that of proprietary and mixed companies is only as one to eight ; the latter having the additional influence of a large proprietary directly interested in supporting them, besides adopting a more liberal system of commission ; and yet, with all this preponderating influence, some of the older proprietary offices have been obliged to wind up, whilst all the mutual companies have been eminently successful.

There is, therefore, not only room, but an urgent demand for a great increase of Mutual Assurance Societies.

AMOUNT OF REAL CAPITAL OF LIFE ASSURANCE COMPANIES.

The amount of capital published by each office creates a most erroneous impression, and of such the most extravagant opinions are frequently formed.

It is not necessary to dwell on the importance to the public, as well as to the success of Life Assurance Societies, that every institution connected with life contingencies should have an available capital of an amount adequate to and capable at any time of being applied to the liquidation of all its risks and liabilities. Large actual funds in hand, so far from being required, are cumbersome and disadvantageous in the transactions of Life Offices, and injurious to the interests of the assured.

The question whether a subscribed capital is or is not really the security to the assured is much dwelt on by proprietary companies, and the want of a permanent subscribed capital has been often urged against mutual societies.

The capitals advertised of £500,000 or £1,000,000, have seldom £10 per cent. paid (of all the published capitals of the various offices, that of the Globe alone is entirely paid up). If so large a capital were in reality paid up, it must be a most extensive business which could afford to pay an interest of 5 per cent. thereon to shareholders, while the society was in fact making very little more than 3 per cent. of its capital in the funds.

If an office has a subscribed capital of £500,000, the assured will have to pay from £5,000 to £10,000 per annum for it, which will make a considerable deduction

from their profits, if the office is not doing a very extensive business.* The only use of capital is to start an office at first; all capital over and above what is sufficient for this purpose is so much burden to the office and loss to the assured, for the profits which ought to go to the assured are exhausted in paying for the capital.

The business of pure proprietary companies is frequently conducted on a scale of premiums too low to be remunerative, and an office trading upon the basis of inadequate rates must apply a portion of the premiums to make up dividends to shareholders; and, therefore, in the words of a distinguished authority on this subject,—“Capital would be an injury and not a benefit; for since this capital is really paid for, in whole or in part, out of premiums, it would not preserve the office from insolvency, but would rather accelerate its progress towards bankruptcy.”† Another disadvantage is, that the assured would not be aware of their danger, because from the nature of the business, the receipts of a Life Society are greater for many years than their obligations.

But as the assured lives gradually deteriorate, the inevitable course of proprietary schemes is, that an assurance capital other than that made up of their own

* A company of high standing advertises its capital of £5,000,000. If this were paid up and invested it would ruin the company, as the excess of interest paid to shareholders beyond that yielded by the investments would amount to about £70,000 per annum. A moderate capital—a small board of directors, of known personal respectability and intelligence, and equitable rates of premium consistent with perfect safety, should be the distinguishing characteristic of a Life Assurance Society.

† Professor De Morgan.

premiums is insufficient to afford full protection to the assured.

The purchase of a Life Assurance, the advantage of which is remote and prospective, resembles the purchase of no other commodity, as its security is wholly dependent on the sufficiency of the aggregate contributions; and the demands on this fund ought to be few and distant.

If, however, these contributions be exhausted by early and successive payments of dividends, it must ultimately terminate in injustice to the assurer.

All experience and knowledge of the principle of Life Assurance proves that a permanent paid-up capital in addition to the deposited premiums of a Life Company is a constant obstacle to the progress of the undertaking, and opposed to the interests of the assured. It is necessarily attended with an expense greater or less in proportion to the magnitude of the sum advanced, the mere interest arising from the paid-up capital being insufficient for the payment of adequate dividends to the shareholders, who receive the deficiency out of the contributions of the assured.

The capital, instead of being a protection, is, in reality, a very serious burden. If any one will take the trouble of calculating he will find that, as compared with the expected duration of an Assurance Office, the accumulated dividends paid out of the premiums to the shareholders will abstract a sum greater than the capital itself out of which they profess to provide for the security of the assured.

Mr. Charles Babbage and other writers have shown that there is not the least necessity for any capital for an Assurance Society after it is fairly established, as the pre-

miums of the living are always sufficient to pay the policies of those dying in the course of the year.

The disposable fund constantly arising from the payment of premiums, and which will continue to increase by the interest accruing upon it, will meet the common variation in the rate of mortality.

It is obvious that the mutual office, having no such drain on the resources of the society, preserves to its members an amount equal to such capital, and that, in reality, the system of mutual offices affords greater security than that which is given by the vaunted capital of the proprietary and mixed companies.

DEFINITION OF CAPITAL AND PROFIT.

The most erroneous conception prevails as to the nature and use of the capital of Assurance Companies—"a mistake not unfrequent, though one which ought to be carefully guarded against—viz., the consideration of accumulated capital in the possession of a company at any period for the payment of its contracts as so much permanent profit or surplus."*

The simplest mode of the operation of forming capital and profit may be illustrated by taking 200 lives at each of the respective ages of 20, 30, 40, 50, 60, making in all 1,000; and assuming that each of these assures his life for £100, and that sixteen out of these die annually, then, calculating by the rates of premium given in Mr. Babbage's tables, the annual sums subscribed will be just equal to pay off the policies of those who die in the respective years, and to form an accumulating fund to meet future demands, so that when the last of the 1,000 died there will be just £100 left to pay this claim. An additional fifth, or twenty per cent. on these premiums, will form an accumulating fund, or surplus, to divide among the policy holders, and the whole will stand thus:—

AGE. PREMIUM.

20	£1	9	6
30	1	18	6
40	2	10	9
50	3	11	0
60	5	1	5

$$14 \ 11 \ 2 \times 200 = 2,911 \ 0 \ 4,$$

the average rate being nearly three per cent.

* Babbage on Insurance.

At the end of the first year, increased by the interest on them, would amount to £2,998; and the payment of £1,600 on account of 16 deaths being deducted, would leave £1,398 at the commencement of the second year. The payments on the 984 remaining lives would be £2,863, which, added to the £1,398, would produce £4,261, which, at the end of the year, would amount to £4,388, and from this the claims due by the average number of deaths being subtracted, the remainder would be £2,788.

The 968 payments of the next year, with interest added thereto, with the deduction of the 16 claims, would produce £4,171 at the end of the third year.

Pursuing this calculation in the same manner, the capital of the society would continue to increase for many years, until the sum arising from the diminished number of members would just be sufficient to pay the number of annual claimants, the result would be as follows:—

At the end of the first year £1,398, after paying £1,600
in claims

„	second year £2,788,	„	£1,600
„	third year £4,171,	„	£1,600
„	fourth year £5,546,	„	£1,600
„	fifth year £6,912,	„	£1,600

Notwithstanding that the property of the society is increased at the end of the fifth year to £6,912, no part of this sum is genuine profit, for the total amount of the value of the policies of the 936 persons then living would be just equal to this sum, added to the value of the annuities due to the society by those persons.

This property, therefore, is capital, liable to be reduced

or expended in fulfilling the engagements of the society, and not profit, which might be fairly distributed among the members.

An additional fifth, or about 20 per cent. of the premiums paid over and above those given in the tables, with the accumulations on it, would be clear profit. This fifth would be, on £2,911, nearly £600, which would thus increase. At the end of the first year it would amount to £618, the interest being added; this being added to £590, amount of profits paid by the 984 surviving at the end of the second year. At the end of the third year the profits paid by the 968 survivors, with interest thereon, would be £1,880, and the result would stand thus at the end of each year:—

First year, amount of profits	£	618
Second year	ditto 1,214
Third year	ditto 1,880
Fourth year	ditto 2,524
Fifth year	ditto 3,178

There would, therefore, be at the end of five years £3,178 profits over and above the £6,912, which sum is equal to meet the liabilities of the claims arising from mortality.

Experience of the offices has found that the average sum assured by each individual is more than £500. If the value of the policies of the 1,000 persons assured above was £500 each, the profits would be £15,890; this would be amply sufficient to defray the expenses of management, and to leave a surplus to be divided among the assured.



SOURCES OF REAL SURPLUS.

The sources of profit for Life Assurance premiums are computed from established tables of mortality, and unless the deaths take place according to the assumed standard exhibited by those tables, there will be a deficiency or surplus of capital, as the deaths exceed or fall below the average. On the one hand, a portion of the subscribed capital must be appropriated to supply the deficiency, or if mutual societies, a call must be made upon the policy holders. On the other hand, there will be a profit or surplus fund to be divided; but the division of this surplus differs according to the principles on which the various systems for Life Assurance are established.

The surplus or profits produced from the accumulation of premiums paid above the amount of the claims returned arises from several causes.

"1st. That proportion of profits which would be assigned to the policies of persons not yet qualified to participate in such. 2nd. The sums periodically retained in a society out of discontinued or forfeited policies, which never become claims. 3rd. The higher rate of interest realised beyond that by which the tables of premiums is computed. And 4th. A larger average duration of life among the assured than that assigned in the table of mortality adopted by the office."* In the latter case, a party may pay to the office a sum greater than his representatives receive.

* Brookes's "Observations on Morgan's Rise of the Equitable Society," p. 32.

Example :—An assurance is effected upon the life of a person aged between 16 and 17 years for £100, receivable at his death, the annual payment for which in some offices is £2 8s. ; and if he (the party whose life is assured) live a day over twenty-seven years, when he has paid for one year more, he will have contributed £101 18s. 8d. ; and the Carlisle table of mortality shows the expectation of such a life to be between 43 and 44 years, or about 16 years and 6 months greater than the period for which the premium was estimated.

If the regular annual mortality could be relied on for the future, there can be no doubt that the most equitable plan for any Life Office to adopt would be to reduce their premiums to the ascertained scale. But as these facts cannot be previously ascertained, it is obvious that any society reducing for the future its annual premiums on any such hypothesis renders itself liable to objections, and admits the possibility of abrupt and violent alterations in the apparent condition of the society. It will be readily perceived that a surplus can only be produced out of assurance premiums, and only in consequence of those premiums being calculated at a rate higher than the absolute nature or risk required.

Besides this mode of acquiring profits, a very large source of surplus is obtained by actually increasing the capital by obtaining for it a higher rate of interest than 3 per cent. per annum—viz., by investing the premiums at a low price of stocks, thus obtaining good interest for their capital, and these stocks afterwards rising, by which the value of their capital is proportionably increased. There is also to be considered that portion of a premium which is paid for any particular purpose by an individual

for short periods, and then discontinued. In addition to these advantages a great number of policies fall in from parties neglecting to pay their premiums, or surrendering them on terms advantageous to the office, by fines for the renewal of policies, by loans on mortgage of freehold or leasehold property, or by money advanced on the joint bonds of individuals at a fixed rate of interest.

If the rates of premiums were calculated from the probabilities of the life of the whole mass of the people, there would be a great increase of profit. Some of the offices, however, make large profits, of which the Equitable is an example; for in 57 years it accumulated six millions, and it is understood that its capital in 1831 was ten millions and a-half, valuing the Three per Cents. at 90; while the bonuses assigned to policies prove that no inconsiderable part of this capital is profit.

The Equitable Society up to 1820 added to a policy of
20 years' date 77 per cent.

30	„	161	„
40	„	280	„
50	„	401	„

And one member, aged 90 years, has 497 per cent. added to his policy.

And to take a more modern instance, the Metropolitan Mutual Assurance Company, though established only eleven years, has already a policy fund of nearly half-a-million; and an income of £70,000 a year from premiums alone.

THE METHOD OF ASCERTAINING THE AMOUNT OF REAL SURPLUS.

The surplus of every Life Assurance Society consists of the actual money difference, at any given period, between the society's liabilities and its assets, and is ascertained by valuing all the annual premiums due with the past and future accumulations, and also of the claims and liabilities upon all the policies against the existing capital. If the value of the capital exceeds the value of its liabilities, the balance is what is technically termed the surplus, and an addition is made to each policy, or the premium is diminished.

The calculations are computed so as to leave premiums sufficient to meet future contingencies. On these principles all Assurance Societies, whatever may be their nature or class, whether proprietary, mixed, or mutual, proceed to ascertain the surplus.

Thus proprietary companies appropriate the whole of the surplus, paying only the sum mentioned on the policy. The mixed companies allow a portion of the profits to the assured, adding certain proportions to the amount of the policy, or making deductions from the future annual premiums, and the remainder is taken by the shareholders. In mutual societies, after investing an equivalent portion of the profits as a reserve fund, the whole surplus is allotted amongst the policy holders, and creates what is technically called the bonus.

The method adopted to prevent undue accumulation is at regular intervals to reduce the premiums that become payable on each policy. The diminution of premium de-

pend upon the excess of capital in hand, and the then existing value of the future premiums beyond the claims which are or may be made upon it.

The existence of an immense source of profit arising from too high a rate of mortality was not ascertained until the year 1776, when the plan of Dr. Price for keeping the accounts was adopted for reducing the large amount of surplus possessed by the Equitable Society. The method consisted of three plans:—

“The first was by ascertaining the proportion of the claims to the premiums; the second was by comparing the actual decrease of life in the members of the society with those assigned by the Breslau table, from which the rates of assurance had been originally calculated; and the third was by making a separate computation of the values of all the different policies which had been issued by the society, and comparing them with its capital.”

Dr. Price also urged the importance of altering the table of premiums then published for the society, not only as being exorbitantly high, but as absurd, and inconsistent with the results of all observations, alluding particularly to the hazards on the lives of females and youth. These extraordinary charges were immediately abolished, and the preceding plans were adopted for ascertaining the state of the society from the year 1768 to 1776 inclusive.

By the first of these it appeared that, on an average, during the nine years preceding, the annual surplus had been about £3,000; by the second, that the probabilities of life were higher than those in Mr. Dodson's table of mortality, whence the premiums had been computed, in the proportion of three to two; and by the third plan, that

the whole surplus stock of the society amounted to nearly £30,000.

In consequence of these very favourable results, the premiums were reduced one-tenth, which appears, however, to have had but little effect in lessening the amount of those profits, for the continual accession of new members, added to the former, fully supplied the deficiency produced in the surplus by the reduction of the premiums, and thus caused it to increase in very nearly the same proportion.

In 1780 Dr. Price, previously to the appearance of the fourth edition of his work on reversionary payments, constructed the celebrated Northampton and other tables of mortality—an account of which has been already given—which new standards he recommended to the society, and before the end of 1781 a complete set of tables and rates of assurance was computed for its use from the Northampton observations, consisting of upwards of 20,000 calculations, and containing the values of annuities on single and joint lives of all ages, and of gross and annual premiums.

Though the new rates were computed at 3 per cent., they were so far below the premiums then in use that it was proposed to make an addition of 15 per cent. on the whole amount, to prevent too sudden a reduction in the annual income of the society. By the aid of these tables, the yearly premiums, which would have been £36,000 according to the old rates, were reduced to little more than £32,000; and to compensate the then members for having previously contributed too much to the society, an addition was made of 30s. to every £100 in respect of every payment made prior to January 1st, 1782.

Another investigation of the surplus took place in

1785, when it was found to be so considerable that the additional 15 per cent. on the premiums was taken off, and a further increase of the sums assured took place, at the rate of £1 upon each £100 for every payment made prior to January 1st, 1786. By this operation the surplus of £164,000 was reduced to £110,000; and every person assured previously to 1772 had 30 per cent. added to the original sum mentioned in his policy.*

It has been shown that the useless guarantee of a large surplus constantly retained as capital for contingencies is unlikely to be required, provided the estimate of liabilities be taken accurately. This part of the profits should have some relative proportion to the liabilities, instead of being allowed to accumulate without limit.

Prudence and experience may justify some extra provision for extraordinary and unexpected claims. A percentage of 10 per cent. on the estimated capital required might be deemed sufficient. If the liabilities of a society in any given year be estimated at £25,000, at 10 per cent., or £2,500, for expenses of management, £27,500 might be considered as efficient capital for that year, and the remainder of the funds might be safely divided among the assured.

By this method there could be no overgrown and disproportionate accumulations, but the surplus would always bear some relation to the demands on the society, and the early members would reap the benefit in an equitable proportion with those assuring at a later period.

Mr. Frend observes, in his paper on Assurances in the

* Morgan's "Views of the Rise of the Equitable Society," pp. 19—23.

Supplement to the "Encyclopædia Britannica," that this reserve has led to a singular anomaly in one of the most distinguished companies for Life Assurance.

In that company all the assured are partners, being mutually guarantees to each other for their respective claims; therefore the surplus arising from the excess of premiums, and the accumulations above the claims, evidently belong to the whole of the company, and, consequently, every partner is entitled to a portion of it.

But of this surplus, one-third being constantly retained, and each person at his death ceasing to be a partner, every person leaves behind him a portion for his successors; this third, therefore, may be considered without an owner, since a partner has no right in it during his life, and his representatives or assigns have no claim upon it after his death. This anomaly led to the formation of a plan adopted by another company, which vests the third part of the surplus in determinate hands. To effect this the company consists of a number of proprietors, each of whom is bound to keep up an assurance with it, and whose interest in such assurances is greater than that derived from the profits of assurances granted to non-proprietors. The company takes upon itself the whole risk of policies made with it, being bound to pay to each partner the sum specified in his policy, and additions are made to each policy in the manner above mentioned; but the third reserved is joined to, and makes part of the subscribed capital stock, and the interest upon it is annually divided among the proprietors. Thus the reserved third belongs to the company collectively, and contributes to its security; and the non-proprietors, without risk, participate in two-thirds of the surplus at every periodical division of the profits.

MANNER AND TIME OF DIVISION OF PROFITS.

It is necessary and prudent that the funds of a society should be suffered to accumulate for the first five years, before any estimate of the profits is formed, or any portion divided declared. The system of taking an annual estimate of profits recently introduced in the practice of Life Assurance, is the more equitable method of dividing the profits, which have increased to such an extent in mutual societies, as to render the mode of their division among the assured a matter of interest and importance.

The method still retained by some companies is to ascertain the total amount of surplus premiums decennially or septennially, and then to distribute amongst the assured their respective shares of that profit, by adding reversionary bonuses to their several policies.

An obvious objection to this plan arises from the length of intervals between the times of distribution, the claims occurring at any period before one of the decennial or septennial rests receiving no part of the accumulations which have arisen since the prior distribution; whereas, by making an annual division of the assets of the society, and applying each person's share of the profits to the diminution of his future premiums, the distribution is made equitably, and the assured have the full advantage of the bonuses in their own lifetime.

Notwithstanding the extreme regularity with which the system of annual investigation has been hitherto found to work, it has been urged that any system of annual settlement in the affairs of a Life Assurance Society, would be

marked by abrupt and startling differences, and attended with both danger and inconvenience. The late Mr. Wm. Morgan, in one of his addresses to the general meeting of the Equitable Society, in the year of 1800, says—"Can anything be more absurd, or betray greater ignorance than to propose an annual profit-and-loss account in a concern of this kind, or to regulate the dividend or call by the success or failure of each year?" Had this eminent actuary lived a few years longer, he would have modified his opinion; as the experience of several societies—one of which has been in existence nearly half a century—would have convinced him that annual investigation was practicable, and that it is essential to the scheme of any society desirous of promoting the interests of its members; that it is perfectly free from the difficulties and dangers he anticipated; regular in its operation, and more calculated to preserve a society in a sound and prosperous condition than the mode of procrastinating the periods of division to decennial or septennial rests.

It is not essential to the safety of an institution that the results of annual rests should be always progressive in their character, nor, indeed, would any actual retrogression in the surplus itself indicate that a society was, in reality, in an insecure position. It is the very nature of a Life Assurance Society that the experience of one year should differ from the experience of another; and so long as these oscillations are confined within reasonable limit, the credit of the society would remain undiminished. All mutual companies have been enabled to divide surplus premiums after providing for their obligations, and in those of an old standing several hundred per cent. has been added to the original policies. A reduction in the premiums of from 20 to 25

and 40 per cent. may be expected in an office granting assurances on adequate premiums, after a policy has been five years in existence, and thereafter larger reductions will occur.

If, then, a mutual society charging adequate premiums is perfectly safe, there is no risk incurred by the proprietors; in which case the assured ought not to be deprived of any of the profits arising from their advances. From the inadequacy of the premiums no amount of capital can protect the assured; but, on the contrary, solid or substantial security for possible accidents or contingencies is afforded.

It appears that, both from justice and policy, there should be some countervailing advantages to those subscribing first over members admitted afterwards.

It might, perhaps, be eligible to allow those who subscribe in the first, second, third, fourth, and fifth years, a greater proportion of profits than those subscribing after that period. Thus, when the profits are estimated and first divided at the end of the fifth year, the surplus of those occurring from the first four years might be allotted to the early members; for example, persons having assured in the first year should have the largest proportion relative to their numbers, and so on through the four succeeding years in a decreasing ratio.

The portion of this sum distributed each year among the early members might be allotted so that the fund should decrease as the members decreased by death, and that when the last participator died that money should be wholly expended, having been entirely divided among the original members.

CHAPTER IV.

THE PRINCIPLE AND PRACTICE OF LIFE ASSURANCE.

WE have traced Life Assurance from its commencement with Tontines until the present time, and we now propose to explain the general principle and practice of Life Assurance, the plan upon which the business is usually conducted, and the advantages peculiar to this mode of investment.

The principle of Life Assurance calculation depends on the regularity of the average of mortality of a large number of individuals. Mathematical calculation can determine with considerable exactness what an Insurance Office will lose by engaging to pay a certain sum on the death of each of a large number of individuals, and what it will gain by the annual sums or premiums which it receives from them; and by properly balancing the loss and gain we can determine what annual premium an office should demand, if it contracts to pay a certain sum to the family of a specified individual, of given age, on his death.

Thus, for example, out of 86,292 healthy persons, aged 30 on the first day of 1848, about 727 will die in 1848, 734 in 1849, 742 in 1850, and so on from year to year. Say that £100 was paid on the death of each of the 86,292 individuals, there would be a loss of about £72,700 in 1848, £73,400 in 1849, £74,200 in 1850, and so on in proportion from year to year.

It is evident from this that we can calculate with accu-

racy the whole sum an office would lose by undertaking to pay £100 on the death of each of these individuals.

If a certain sum was paid, say £1 for each of the assured, at the beginning of each year of their lives, an office would receive £86,292 in 1848, about £727 less in 1849, £734 less in 1850, and so on; and thus we can calculate the whole sum an office would gain by these annual payments.

The fluctuation in the rate of interest of money is an important feature in conducting the scheme of Life Assurance, and the numberless contingencies on which this rate depends are well known. It is clear, therefore, that an office always loses by a fall in the rate of interest, and gains by a rise; and this is a cause of considerable fluctuation in the gains of an Assurance Office.

Hence it appears that a Life Office must always provide against unexpected claims arising from changes in the rate of mortality and the rate of interest.

The only practical way to do this is to make the persons assured pay a little more than is actually necessary, supposing the rate of mortality and rate of interest to be certain and unvarying.

In fixing premiums, an office should bear in mind that security is the primary and most important object of Life Assurance, and to attain security it is necessary that the premiums should be sufficiently high to cover the losses arising from unexpected claims and fluctuations of every kind, at the same time that the premiums should be equitably apportioned to the different ages of the assured, and should not give an unfair advantage either to the old or the young.

The practice of Life Assurance, which has opened its

advantages to all classes of society, and rendered it applicable in every arrangement of property and interest contingent upon human life, suggests the consideration of premiums.

The various distinctions which characterise the business of insurance are declared to be fixed, regulated, and defined by the known and acknowledged standard of mortality, and it is perfectly understood that the differences in the scale of charges for premium are computed more or less above the average life risk, in pursuance of the avowed objects of the companies to act on the non bonus or pure proprietary, the mixed mutual and proprietary, or the purely mutual systems.

The first, or the pure proprietary premiums, ought to be the lowest in the scale; the last, or the purely mutual, are almost invariably the highest. To the system of advanced rates above the accepted standard of mortality no objection can be urged, for such a line of policy as it involves is demanded by common prudence, which also requires a rate of premium beyond the actual law of mortality, as the failure of a Life Company in fulfilling their engagements would be attended with such wide-spread and disastrous consequences that no institution charging merely the calculated equivalent rates would receive such support from the public as to enable them to carry on business for any length of time. Moreover, insurers are left to decide whether they would prefer the increased premiums to be returned in the name of bonuses, or profits, or the lower, though still authorised and acknowledged safe standard, but which could not be followed by corresponding bonuses.

The only consideration is that the premiums charged

are not too high to prove any inconvenience, or too low to excite apprehensions in respect of security. This medium is the only one deserving the name of assurance, as the best, if not the only solid foundation for future advantages, confidence, and security.

As no capital whatever is requisite for the working of an Assurance Office after it has been established, so the public might reasonably expect to find that those companies which return no part or a portion of the profits to the assured would require a lower premium for assuring an equivalent sum; but such is not the case, their charges being as high on the average, and in some instances even higher than those demanded by the mutual Assurance Societies.

The premiums demanded by some offices are disproportionably higher than others in the same class, and one is at a loss to understand why an office should charge £7 14s. 11d. per annum for an advantage which can be equally well obtained by paying £6 5s. per annum, for these are the rates per cent. charged by two different offices for those assured at the age of sixty.

In a society of mutual assurers it is quite right and prudent to take a considerable excess of premium, in order to prevent consequences arising from the fluctuations in the number of deaths; "but where there exists a subscribed capital, its very object being to equalise such variations, it is unreasonable to demand as large premiums as are required in a society of mutual assurance."*

The enormous premiums demanded by many proprietary offices, which return no part, or only a portion of profit to

* Babbage, page 105.

assurers, induce many a man to endeavour to accumulate his own money, and run the risk of living to accomplish the desired object. The great majority of assurers are not possessed of capital; they assure because they are not; and the object of an Assurance Society should be, not to abstract from funds for which every man so circumstanced has full occasion, more than will render it absolutely certain that the proposed object will be obtained with perfect safety.

The probabilities of life, taken from the Government annuity tables, are at the respective ages as follow, whence annuities at each period are calculated, interest being reckoned at $3\frac{1}{2}$ per cent.

To these are subjoined in the following table the highest and lowest premiums, together with the premiums from Mr. Babbage's table at the respective ages; thus a comparative view may be taken of the whole:—

Age.	Expectation of Life.	Annuity which would amount to £100 in that time.	Highest premium demanded by the office for £100 policy.	Lowest premium demanded by the office for £100 policy.	Premiums calculated just to be equal to the rise.
20	32	1 14 11	2 3 7	1 10 7	1 9 6
30	29	2 0 11	2 13 5	2 0 5	1 18 6
40	24	2 14 6 $\frac{1}{2}$	3 8 0	2 15 10	2 10 9
50	18	4 1 7 $\frac{1}{2}$	4 14 2	4 0 8	3 11 0
60	13	6 4 1 $\frac{1}{2}$	7 4 11	5 14 9	5 1 3

The highest premiums taken at the respective ages of

20	} Amount to £100	{	27 years and a little more.
30			24
40			20 $\frac{1}{2}$
50			16
60			10 $\frac{1}{2}$

The lowest premium at 60 years of age will amount to

£100 in 14 years; the lowest premiums at the other ages are so similar to annuities that it is unnecessary to go into any calculations concerning them.

The average age at which people assure is found by Mr. Babbage to be 47, the charge for assurance at which age is about 4 per cent.

Mr. Morgan in the year 1816 stated as the result of the Equitable experience of 45 years, that not one in 60 of those assured at that office die annually.

If twelve lives at each of the respective ages be taken, and it is assumed that one dies every year, till the end of 60 years, the following will be the result according to these rates of premium:—

AGE.	PREMIUM.				PREMIUM.							
	£	s.	d.		£	s.	d.					
20 ...	1	17	4	} + 12 each	22	8	0					
30 ...	2	8	0		28	16	0					
40 ...	3	5	0		39	0	0					
50 ...	4	7	0		52	4	0					
60 ...	6	13	1		79	17	0					
					=	79	17	0	=	222	5	0

will be equal to the amount of the first annual premiums paid by these sixty persons; to which if £7 be added for interest on the sum paid, and £100 be deducted for the one who dies, a profit is left at the end of the year of £129 5s. It is not necessary to enter into an exact calculation on an hypothesis, but by approximating to a series, and taking £222 5s. for the premiums paid in each year, it is found that at the end of sixty years, after paying annually £100 for the annual deaths, there will be left more than £8,000 clear profit on sixty lives, each insuring only £100.

One of the objections which have been urged against the scheme of Life Assurance is, that it is a sinking and destroying income and a personal capital. Many persons are of opinion that they may save money by running all risks and becoming their own assurers; if they live as long as they expect, and have considerable facilities of improving money, the chances are against the majority of persons possessing the advantages which Assurance Offices offer for the outlay of their capital.

Mr. Babbage, in his excellent and valuable work on assurance of lives, has formed the following table from the Equitable experience, to show the advantage of assuring instead of funding capital:—

Will possess at end of years.	A person age 25 paying £100 per ann. premium assures £4,160.	A person laying out £100 per annum at 3 per cent.	Ditto 4 per cent.	Ditto 5 per cent.	Ditto 6 per cent.
10	5,096	1,146	1,201	1,257	1,318
15	6,032	1,860	2,002	2,158	2,328
20	7,072	2,687	2,978	3,307	3,679
25	8,528	3,646	4,165	4,773	5,486
30	10,400	4,757	5,608	6,644	7,906
35	12,688	6,046	7,365	9,032	11,143
40	15,246	7,540	9,503	12,080	15,476
45	18,064	9,272	12,103	15,970	21,274
50	20,862	11,280	15,267	20,985	29,034

By this table it is shown that a person aged 25 laying out £100 per annum, secures a repayment in the event of his death at the end of ten years of £5,096, whereas had the £100 per annum been placed at interest of even 6 per cent., it would in that time have amounted to only £1,318, and a person must continue laying out his money for fifty years at 5 per cent. before it becomes equal to £20,935.

THE BUSINESS OF INSURANCE.

We have no official data whereby to obtain accurate statistics of Life Assurance, either as to the aggregate amount or number of policies effected or rejected, the number of individuals whose lives are insured, or the respective ages, or the number and value of policies granted annually by each office. But some information may be afforded as to the actual extent and further capability of Life Assurance from the following calculations, founded upon the experience of existing societies.

The number of policies issued annually for the average of the first five years by thirteen highly-respectable existing companies is 181. Taking this estimate as the average, every subsequent year would augment the annual amount of business, as will be seen by the following results, derived from twenty-five different companies:—Average number of policies issued annually during the first period of five years, 163; second period of five years, 282; third period of five years, 351. At the end of the first five years, the annual income from premiums only will exceed £25,000.

It appears that among several offices recently established, one received for premiums on life policies during the first year, £5,000; another about £2,000; a third about £1,800; a fourth about £1,500; other new offices, established within the last two or three years, have received from £800 to £1,200 per annum.

An office of the medium class has issued from its commencement in 1834 about 4,000 policies, of which about 1,900 are now in existence.

It may not be unreasonable to consider that

53 offices average 2,850 existing policies, numbering	£150,050
77 „ 634 „	48,818

Total number of permanent policies £198,868

It is calculated that as many persons effect several policies upon their lives; the actual number of persons insuring their lives exceeds 120,000, or probably amount to about 150,000, being not one in ten of the heads of families of those classes of society to whom Life Assurance is applicable. Estimate the amount insured by each policy at £500 each:—

The total amount of Life Assurance would

be	£99,434,000
Annual premiums at 3 per cent. per annum	2,983,020
Averaging to each of the 130 offices per annum	22,946

Or to each of the

53 larger offices in respect of 150,050 policies	42,467
77 smaller „ 48,818 „	9,510

We take for example the operations of one company alone, the balance-sheet of which shows that the premiums received on new policies for the year 1847 amount to £6,635; and taking this sum at the average of $2\frac{1}{2}$ per cent., it will appear that new insurances have been effected to the extent of £331,000, whilst the claims from mortality form an amount of less than £30,000. Although it is not practicable to make an estimate of the total amount of business actually transacted in the kingdom, we may assume, from the statement of this office, there is a probable increase in the amount of insurance to the extent

of about £250,000 in a single year; and if we take one hundred offices in England and Scotland transacting on an average the same amount of business, it would appear that the amount of assurance exceeds the enormous sum of twenty-five millions. If, however, this view is any way correct, and that each year is to draw into these offices so prodigious an accession of business, it may indeed be said that Life Assurance is yet in its infancy.

RATES OF ASSURANCE.

The following are the rates of Life Assurance for £100 of a few offices selected promiscuously:—

WITHOUT PROFITS.																		
Age.	Asylum.			Church of England.			Hand-in-Hand.			Imperial.			Metropolitan.			Royal Exchange.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20	1	11	9	1	13	11	1	14	5	1	16	11	1	14	5	2	3	6
30	2	2	0	2	2	7	2	3	6	2	7	0	2	3	0	2	13	3
40	2	17	1	2	17	8	3	0	9	3	0	11	2	16	6	3	8	0
50	4	2	0	4	4	11	4	6	11	4	4	6	3	18	8	4	10	9
60	6	10	9	6	14	2	6	7	4	6	1	4	6	0	6	6	7	3

WITH PROFITS.																		
Age.	Amicable			Clerical and Medical.			Crown.			Econo- mic.			Equitable			Mutual.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20	2	0	6	2	0	6	1	19	11	1	14	7	2	3	7	1	18	0
30	2	10	6	2	10	4	2	10	4	2	4	3	2	13	5	2	9	5
40	3	5	0	3	8	3	8	3	4	7	2	19	9	3	7	11	3	7
50	4	16	6	4	7	3	4	8	11	4	8	0	4	10	8	4	10	8
60	7	6	6	6	7	2	6	7	2	7	0	7	6	7	4	6	7	4

The highest rate (without profits upon a life aged 30) charged by any office appears to be the

	£	s.	d.
Royal Exchange and Globe	2	13	5
Highest with profits London Association	2	19	3
Lowest rates without profits Licensed Victuallers'	1	19	8
Ditto with profits Economic	2	4	3

Notwithstanding these calculations assume that the number and amount of existing policies are greatly over-rated, from the fact that many of the more important offices derive great portion of their incomes from fire or marine insurances; yet even if the actual number be largely underrated, still it is obvious that Life Assurance is but imperfectly and partially developed, and that the present numerous offices may be beneficially increased until a sound understanding of the science and of the value of Life Assurance, and the practice of employing them, shall be made available.

THE PRACTICE OF LIFE ASSURANCE.

POLICY OF ASSURANCE.

Policy is the name given to the instrument by which the contract of indemnity is effected between the assurer and the insured; and it is not, like most contracts, signed by both parties, but only by the insurer.

Policies have always been held as sacred agreements, and of the first credit; so much so that they can never be altered by any authority whatever, because it would open a door to an infinite variety of frauds, and introduce uncertainty into a species of contract of which certainty and precision are the most essential requisites.

The term assurance upon a life is a contract whereby the assurers for a certain sum undertake to pay the person assured a specified sum of money or annuity on the death of the person whose life is the subject of assurance. In an assurance made by a person upon his own life the sum assured is payable at his death. Short or term assurances are contracts whereby the sum assured becomes payable in the event of the assured life dying within a certain specified time or term of years.

A person who effects an assurance on his life stipulates to pay to the office a certain sum annually, and the office agrees to pay to the legal representatives of the assured, within a certain period after receiving satisfactory proof of his death, the sum for which the assurance was made.

The sum paid annually (called the premium) is just as much as the amount assured would have realised if such sums were invested at compound interest during as many years as, according to the expectation of life, it is computed the assurer will live. If he die before the period calculated upon the family will be gainers by the transaction; if he outlive that period the office will gain.

Observation on the law of mortality has shown that a certain number of persons die during each year out of every hundred, every thousand, or any greater number, and that when these observations are applied to large numbers of persons, the numbers dying in each year, at each age, do not materially vary, but afford regular results.

Thus, for example, of 1,000 individuals, it is generally assumed that—

At age 20	7	will die within a year
30	10	„
40	12	„
50	14	„
55	19	„

Out of 1,000 men of 35 years of age it is calculated that about 10 will die within the year: now if each of the 1,000 individuals subscribe £1 at the beginning of the year it will yield a fund of £1,000, allowing payments of £100 to the representatives of each of the 10 who may die.

The above is a simple case, showing the application of the principle for one year; but in the practice of Life Assurance persons generally make an agreement with a society to assure them at a fixed rate for the whole of

life. Thus the annual payment required for a fixed sum of £100 to be paid at death, and not varying with increased age, is—

Age.	£	s.	d.
20	1	12	10
25	1	17	6
30	2	2	11
35	2	9	2
40	2	17	3
45	3	6	5
50	3	19	9
55	5	0	0
60	6	3	0

And a bond or policy may be obtained from an Assurance Society on these terms; the sum stipulated to be paid at death being secured without reference to other individuals assured with the society; it being the business of the Assurance Society, not of individuals, to obtain a sufficient number of members to secure what is termed “an average”—that is, such a number as will give complete regularity in the results.

From the time of the first payment being made by an individual to an Assurance Company, the sum assured is payable at his death to his representatives or assigns.

The party agreeing to pay this sum is called the *assurer*, and the person to whom the policy is granted, the *assured*; the sum paid in advance as a consideration for that which is agreed to be paid on the death of the party is called the *premium*.

PREMIUMS OF ASSURANCE.

Many persons do not understand the meaning of the words "Annual premiums on a Life Assurance."

Premium is a single sum paid down when the life is assured, or a sum paid annually until the death of the life assured; constructed from tables of mortality, mathematically showing the probable number of deaths that will occur at a certain age in a given time. After a table of the decrement of human life has been formed, a series of calculations is made from it, to fix the amount of annual or other premiums, estimating money at such a rate of interest as to bear a fair proportion to the various sums to be returned, and the chances of life at the different ages at which persons become assured.

The rate of interest is generally assumed to be 3 per cent. per annum, and as money will double itself in eighteen years, at compound interest at the rate of £4 per cent per annum, the premium paid on effecting a policy will be greater than the real value of the future payment.

We will give an illustration of this principle, with the fair allowance for risk, and for interest required for the money paid, to be returned at some future time:—

"It appears by the Carlisle table of mortality, during the period when the observations on which it is founded were made, that out of 10,000 children born, 3,203 died under five years of age; the remaining 6,797 completed their fifth year; out of those 6,797, 6,460 survived their tenth year; out of those 6,460, 6,047 survived the age of twenty-one; and that out of 5,075 who attained forty, only 3,643 survived their sixtieth year. Since, therefore, it is found that 6,460 children may survive their tenth year, if so many were taken indiscriminately from the

population at ten years old, and an office or company were to engage to pay £1 eleven years hence for each of them who might then be living, it would be equivalent to promising to pay £6,047 at the end of the term. Therefore, in order that the office should neither gain nor lose by the engagement, it should upon entering into it receive the whole present value of £6,047, to be paid for that number of lives at the end of the eleven years, with $\frac{1}{6460}$ th part of it for each life, for the chance of the whole surviving.

“The present value of £100 to be received upon a life of ten years arriving at the age of twenty-one would therefore be £54 14s. 7d., taking the rate of interest at 5 per cent.

“It is thus evident that if the present value of £1 to be received with certainty at the end of a given term be multiplied by the number placed against the age in the table of mortality, greater than that of any proposed life by the given term, and divided by the number in the same table against the present age of that life, the quotient will be the present value of £1, to be received at the expiration of the term, provided that the life survive it.”*

The table of premiums is therefore deduced from the table of mortality by strict mathematical calculations, with due regard to the value of money.

The manner of calculating premiums of assurance from tables of mortality is thus :—

“Suppose the premium which is payable in one sum on the life of a person of a given age be known, then the premium payable in like manner on the life of a person one year younger, which is compounded of the premium for one year—and the present value of the

* Mr. Joshua Milne, on Annuities, in Supplement to the “Encyclopædia Britannica.”

premium so known can be easily calculated from the table of mortality, thus :—Multiply the premium on the older life by the number living at that age (according to the table), and divide by the number living at the younger age,—this sum discounted for a year gives the premium which would be payable at the end of the year.

“ Then multiply the sum to be assured by the number of persons of the younger age who, according to the tables, die in a year, and divide by the number of persons alive at that age : the sum discounted for a year is the premium of assurance for the first year ; and the two sums added together give the whole amount of the desired premium. Now, as a person of the greatest age in the table must die in the ensuing year, the premium in his case is evidently the sum to be paid discounted for one year, and thence the premium for the age next below the oldest age is ascertained by the above rule ; and so for every age in succession. In this process no error can be committed without detection, as every step may be checked by a similar table, showing the value of an annuity at every age.

“ The preceding rules give a table of rates for the payment of a single premium only ; but as it is generally more convenient for the assured to pay an equivalent annual sum, a table of such rates is made by dividing the single premium for each age by the value of an annuity of £1 at that age, increased by unity, on the premium for one year. If the annual premium were to be paid at the end of the year, such an addition would not be required ; but a policy is not granted until one premium is paid, and therefore the reason for the addition is evident.”*

* Mr. Wm. Frend, on Assurance, in the Supplement to “Encyclopædia Britannica.”

TERMINABLE—ASCENDING AND DESCENDING PREMIUMS.

Consist of a certain number of annual payments for a limited number of years. When a sum of money is assured upon payments of a terminable premium, the annual payments may consist of one, three, five, seven, ten, fifteen, or twenty years; after the last of which the office has no further claim upon the party assured, though the sum will be paid upon his decease.

Thus, a man 30 years of age may secure £1,000 at his death to his family and survivors by the payment of
£353 8s. 4d. in a single premium.

	£	s.	d.	
Or by 3 annual payments of	135	8	4	each.
Or by 5 annual payments of	87	17	6	„
Or by 7 annual payments of	63	5	0	„
Or by 10 annual payments of	47	3	4	„
Or by 15 annual payments of	34	17	6	„
Or by 20 annual payments of	30	7	6	„

The greater the number of years to which a terminable premium extends, the smaller will be the annual payment required. Example:—A person aged 40 will be charged about £10 4s. 3d. yearly for assuring £100 for the space of five years; whereas, if the agreement be for a terminable premium to be paid for 20 years, the annual payment will be only £3 14s. 4d. The principle upon which the price of this description of assurance is calculated is the value of the given sum for the time proposed, taking also into account the chances of life of the person upon whose decease it is payable.

Their increasing and decreasing premiums vary periodically in their amount, the principle upon which they are calculated being the division of a given space of time into equal terms, at the expiration of each of which an alteration is made in the sum to be annually paid.

Ascending premium is a premium increased at a certain yearly rate per cent., according to agreement, at stated periods of the life of the assured, as at intervals of five or seven years each, instead of remaining fixed for the whole duration of life. After the expiration of the term stipulated—usually fifteen or twenty years—the payments reach a fixed even rate, at which they continue during the remainder of the life assured.

The system is found peculiarly advantageous when assurances are required to be effected by way of collateral security, as in cases of loans or debts—the scale being low for the first five years, slightly increasing during the next succeeding five years, and further increasing the third five years, and then, with another slight addition in the fourth five years, and then continuing at an equal rate during the remainder of life.

Thus, a person aged 30 may at his decease secure £1,000 by the annual payment of

£	s.	d.	
15	6	8	during the first 5 years.
18	12	6	during the second 5 years.
21	17	6	during the third 5 years.
25	3	4	during the fourth 5 years.
28	10	0	during the remainder of life.

A descending premium is constructed upon the reverse of this arrangement, and is intended for such persons as

may desire to make the largest payments at the commencement of the assurance.

This species of contract is also divided into fixed periods, usually consisting of five years, at the termination of each of which the premium is diminished in various proportions. The rates are graduated for a period of twenty years in four series of five years each, being highest in the first five years, diminishing in the second five years, decreasing still further in the third five years, and being least of all in the last five years, after which the premiums entirely cease.

Thus, a person aged 30 may at his decease secure the sum of £1,000 by the annual payment of

£	s.	d.	
£38	19	2	during the first 5 years.
30	2	6	during the second 5 years.
21	2	6	during the third 5 years.
10	15	10	during the last 5 years.

Thus, after twenty years no further premium is required, so that the sum assured will be payable at the death of the party, whenever it may take place.

In estimating the comparative advantages of the various kinds of premiums, it may be of considerable importance to determine whether it may be most convenient to the assured that his annual premiums should increase, diminish, or terminate at a fixed period.

To such persons as wish to commence an assurance at an early period of life from the prospect that every year will render the payment less difficult, the ascending premium is best adapted. For those who begin an assurance in a time of prosperity, or in the prime of life, a descend-

ing or terminable premium is to be preferred, as it must afford much satisfaction to know that they are being gradually released from their annual payments.

This description of assurance is advantageous to those persons whose incomes are likely to decrease—whilst to such as have only a fixed income for life, the best offices are those which offer the lowest rates of premium.

HALF PREMIUM.

For the information of those not acquainted with the exact working of the half-credit system, it may be desirable to state that formerly assurance on life could only be effected by an equal rate of premium. For example:— A person at the age of 30 wishing to assure for £1,000, to be paid to his family at his decease, the premium would be £21 9s. 2d. annually; whilst, according to the half-credit system, he would be enabled to secure the same benefit to his family, for five years to come, by the payment of £21 9s. 2d. By this arrangement a party is enabled, for five years, to assure a double amount by the same payment.

Thus, suppose the payment by the half premium plan for five years, for an assurance of £2,000, to be £20, the first payment by the half premium plan would be £10 10s., the second yearly payment, £11; the third, £11 10s.; the fourth, £12; the fifth, £12 10s. When the sixth payment becomes due the £50 which has been retained may, at the option of the assured, either then be liquidated, or paid by instalments, or remain at interest at the rate of £5 per cent. per annum until the policy shall become a claim. In the former the future premiums will be £20, in the latter, £22 10s.

This arrangement is most useful, as the assurance may be relinquished at any time without payment of the arrears of premiums; this method enables a party to assure for the first five years at little more than half the usual rate, and to discontinue a policy at about half the usual sacrifice.

PREMIUMS BY INSTALMENTS.

We have explained the system of Life Assurance, "with and without profits," premiums payable annually, half premium, increasing and decreasing scales, also by single payments, and payments for limited periods. Any of these modes may be adopted, and as it is in some cases inconvenient to the assured to pay the premiums in one sum, several offices grant premiums half yearly, or quarterly, thereby rendering it easier to meet the demand by small periodical subscriptions. For this mode of payment the scale is slightly increased, say £5 per cent. per annum.

ASSURANCE WITH OR WITHOUT PROFITS.

Assurances with profits are additions to policies as the surplus increases or the premium diminishes. To participate in either of these advantages an assurance must be effected at the commencement, as the rate of premium for participation is increased.

Policies without profits may be effected at a smaller yearly premium to the assured, but, whatever the success of the association, no advantage is derived thereby to the policy holder, as the original sum remains fixed.

BONUSES—THEIR MEANING.

Whether added to the original amount of policy, or in reduction of annual premiums, bonuses arise from an estimated value of the profits after working a certain term of years. Some offices give bonuses annually, in five years, others in seven and ten years; but no matter at what period bonuses are a portion of the profits of the association.

Bonus is a certain portion of the profit which increases the value of each policy beyond the amount to which the holder, in the first instance, is entitled.

The division, or rather allotment, of profit, which is usually denominated a bonus, takes place periodically, generally at intervals of one, five, or seven years.

The sum allotted to each policy respectively may be appropriated either in liquidation of the annual premium, in

effecting another assurance, or in augmentation of the sum receivable after the death of the assured.

To simplify the question :—Suppose a person in the year 1841 assures in an office which divided its profits septennially, or every seven years, for £1,000, the directors, through their actuary or valuer, find that the fair proportion of this party's share of profits of the whole undertaking is £100, and they add this £100 to his policy of £1,000, making a sum of £1,100 for him to will away, without his having to pay any premium extra per annum for this increase to his policy.

REDUCTION OF PREMIUM.

Instead of having the specific sum of £100 added to the policy without any alteration being made in the annual premium payable to the company, it is, at the option of the assured, competent for him to have that sum spread over his premium; so that a person aged 26, instead of paying £2 3s. 9d. for every £100, would have to pay say only £1 18s. per £100 annually, or he could receive the value in cash, in which case the original policy remains at a fixed amount.

LAPSED POLICIES.

The meaning of lapsed policies is, that when a person who pays for one, two, three, or more years his "annual premium" to the company, has, either from ignorance or neglect, omitted to continue the payment of the premium, the risk of the company ceases, and the policy previously granted him is no longer of value or available, and it falls, or lapses, the money previously paid being forfeited.

In loan offices, in particular, lapsed policies pay a large proportion of the losses by death; when the purpose of making the assurance has been satisfied, and its continuance has become of no consequence, the payment of the premium is omitted, and the policies are seldom, if ever, surrendered to the office, but are suffered to run out; so that, in fact, not half the assurances made in loan offices ever become claims.

A recent report of an office states that, of 508 policies effected on healthy lives, about one-fourth have lapsed; but of the diseased lives four-tenths, or 40 per cent., have lapsed; and the premiums paid on lapsed or discontinued policies may be cited as one particular source of profit. In another office of high standing the premiums paid on lapsed policies in one year were £11,000.

In the early state of the Equitable Society it appears that for seven years the sums paid from this source amounted to £13,000. It further appears that the number of lapsed policies amounted upon the average to £125 per annum, or about one in seven of all the assurances, and continued to increase for many years, until the value of

such securities, from the addition of the sums made to the original policies, had become known, the assured surrendered their policies to the office; but in most cases a different and a more profitable method was adopted, that of disposing of their interest by selling their policies at a public auction, or to reversionary societies, especially established for the purchase of reversions.*

RENEWAL PREMIUMS.

Every policy holder is informed when the premium payable on his policy falls due, and the time allowed for the payment of renewal premiums after they become due varies in different offices from fifteen to thirty days; if, however, the premium is not paid within the specified time, the forfeiture of the policy may be usually prevented in the first six or twelve months, by paying it, together with a fine of 10s. or 20s. per cent. on the amount assured, on satisfactory proof that the assured is then in good health.

* One institution above referred to is called the Reversionary Interest Society, established 1823, for the sale of reversionary property and policies of assurance on lives.

SURRENDER OF POLICIES.

Since the year 1800 the payments annually made upon the surrender of policies amount to a very considerable sum. The plan is to purchase from the assured their policies, at a fair valuation, after the premiums have been paid for a certain number of years; thus relieving themselves from the responsibility incurred by the contract, which transaction is called the surrender of a policy. Suppose the assured wishes to dispose of his policy, most Assurance Offices will purchase the same, provided it has been in force five or not less than three years, for a sum of money payable immediately, or at his death; in which latter case the value is secured by the grant of a new policy, without further payment, to date as a continuation of the old assurance in the future division of profits.

The purchase is generally taken at moderate prices, in consequence of the risk of death to which the society is exposed during the space of time in which the assured has paid the premiums.

Thus a person who has paid an annual premium of £100 for ten years, which has cost him £1,000, the office would not receive more than one-third of the premiums paid, as some remuneration is due to the office for the risk which the society had incurred, and might have sustained a loss of £4,000 or £6,000.

Besides the practice of offices receiving their own policies again at a fair consideration, several societies advance money on their own policies, generally about two-thirds of the price at which they would redeem them; that is, if the annual premium paid was £500, the value

of the policy would be £166 13s. 4d.—two-thirds of this value would, therefore, be £111 2s. 2d. This, however, is of great importance to policy holders, in enabling them on extraordinary emergencies to raise money, perhaps for the payment of the renewal premium, and thus avoiding the forfeiture of a valuable policy. In 1825, a plan was adopted by the Equitable Society of surrendering the additions to policies alone, without the compulsion of surrendering the whole or part of the interest of the assured in a policy at uniform rates, according to his age. It appears from the report of the society in December, 1839, that this was found so convenient to individuals after the additions of 1829 had been declared, that within a short period a mass of policies, amounting to nearly a million sterling, was surrendered, which yielded a considerable source of profit to the society.

PUBLIC SALE OF LIFE POLICIES.

A policy of assurance is assignable property, and often becomes the means by which money is raised, by mortgage or sale of it; but to make the assignment effectual in cases of bankruptcy or insolvency, it is essential that notice of the assignment should be deposited with the office. In cases of purchase, the buyer pays all the future premiums; his advantage consists in being in possession of such a policy at a premium less than he must have paid for it at the existing age of the party upon whose life the policy was granted.

Example:—Suppose a policy to have been effected for £1,000 upon the death of a person aged between 45 and 46 when the assurance was made, and that it was sold when he was between 58 and 59, the buyer would then have to pay only £38 annually, the premium for the former age; whereas, if the life were to be assured at the latter age, the premium would be £63 11s. 8d. For the difference between these two annual payments, viz., £25 11s. 8d., a fair and reasonable price should be paid.

The public sale of life policies labours under two disadvantages, which materially affect their value. The first is, that the proposed buyers are unacquainted with the person whose life has been assured, and the buyer is, in consequence, obliged to incur annual expense to ascertain that he is alive at the time the premium falls due. Policies, therefore, are frequently sold at a very disproportionate price, and, on this account, a deduction is made from the sum which would be considered as a fair compensation for the difference between the two premiums.

The second objection is, that the purchasing of policies with an intention of continuing the payments upon them, without the least interest in the life of the assured, is il-

legal; but although it is in the power of companies who have granted such policies to resist the payment of the amount to a person who has not any interest in the life of the person assured, still it is not probable that any office would dispute a claim upon such a plea; at the same time, a purchaser ought to take into account the possibility of such a law being enforced by offices who may repudiate a just claim.

This doubt is grounded upon an Act of Parliament for regulating insurances passed in 1774, the 14th of Geo. III., chap. xlviii., sect. 1, by which it is declared that "From and after the passing of this act no insurance shall be made by any person or persons, bodies politic or corporate, on the life or lives of any person or persons, or any other event or events whatsoever, wherein the person or persons for whose use or benefit or on whose account such policy or policies shall be made, *shall have no interest*, or by way of gaming, or wager, and that every insurance made contrary to the true intent and meaning hereof shall be null and void, to all intents and purposes."

This law at that period was passed for the purpose of preventing speculations upon life; but although it is supposed that offices will for ever renounce the exaction of the right conferred by such a law, nevertheless the principle is strongly applicable to the purchase of policies.

It is further declared unlawful by this statute for a policy to be granted unless the person effecting it have an interest in the life of the party on whom it is effected, that is, unless the cessation of that life be detrimental to him in a pecuniary way.*

* It is the practice of some of the Life Offices to require a statement of the interest which any person has on proposing to assure the life of another.

LIMITS OF TRAVELLING AND RESIDENCE ALLOWED TO THE ASSURED.

The tables of mortality used by the Assurance Offices having been calculated from the deaths occurring in England only, the uncertainty and risk arising from the change of climate requires an addition to premiums paid, according to the circumstances of each case, on the life of persons residing beyond the limits of Europe.

In assuring the life of a person aged 34, who was proceeding to Calcutta in a civil capacity, the extra premium demanded for the additional risk by different companies actually varied from £2 12s. 6d. to £5 5s. per cent. In some of them the extra charge was to cease if the assured returned in good health; in others this was not made a condition; while one office was content to take the combined risk, ordinary and extraordinary, for the very moderate premium of £4 12s. 6d. per cent.*

. Most of the offices allow the assured to pass by sea from one part of Great Britain to another, to reside in any part of Europe without the payment of any additional premium, provided that the voyages be performed in decked vessels, established packets, &c. Some offices extend the limits of travelling to the Cape of Good Hope within certain limits, in parts of Australia, in parts of Upper and Lower Canada, and in certain parts of British North America; but due notice of such intention to reside out of Europe is required, and licence to that effect obtained from the company. But the assured are allowed during peace to pass in proper vessels from England to several

* Kelly's "Practical Treatise on the Law of Life Annuities." London, 1835. 8vo., p. 243.

parts in the English Channel, Bay of Biscay, and German Ocean, between the Texel, at the extremity of Holland on the north, and the French port of Brest on the south.

In some offices the voyages have not been restricted providing extra premium is paid; that is, policies granted upon the whole world system, which afford the only security to persons assuring the lives of others.

TABLES OF PREMIUMS.

Premiums of assurance are calculated upon Carlisle mortality, from the experience of seventeen of the oldest London Life Offices as to the expectation of life. It having been ascertained by these tables that the average duration of the lives of a multitude of individuals is liable to a very little fluctuation, and the continuance of life at each age having been determined, there remains only the easy problem for an arithmetician to solve—viz., the amount of the annual sum required, with its accumulating interest, during lives of a certain duration, to make up the respective sums to be paid as the deaths occurred.

The whole theory of Life Assurance proceeds upon this simple principle; but as no law of mortality, however correct, can be considered an unerring guide in calculating for future and distant events, higher premiums than a strict regard to the law of mortality would warrant are always demanded.

The practice adopted is to add about 20 or 25 per cent. for a guarantee on the mutual scale, and to grant absolute policies without participation, guaranteed by the

funds of the mutual association on the same principle as the mutual tables, adding only about 10 or 15 per cent. for expenses, management, and guarantee.

The application of the surplus funds thence arising has already been explained.

RESPONSIBILITY OF LIFE OFFICES.

Assurance Offices calculate their tables at the rate of 3 per cent. per annum, and have the advantage of any interest they may accumulate over 3 per cent. of lapsed policies, and 20 or 25 per cent. guarantee on the premiums of the mutual, and from 10 to 15 per cent. on those of the non-participating policies in their favour, besides providing for their obligations; against which they have only to provide for expenses and management,—the surplus will, in the manner described, be appropriated as bonus at each investigation.

But, further, if an office appropriate the whole premiums in expenses for three years (deducting the premiums for a three years' risk only), and at the end of that period transfer their policies to an established office, without further consideration than the future premiums, the policy holders would at any time be provided against risk without loss, difficulty, or compromise.

PROFIT AND LOSS OF LIFE ASSURANCE.

The probabilities of life and death, and the current interest of money, constitute the fundamental principles by which all systems of Life Assurance are governed; to avoid loss, then, we must have due regard to the most accurate calculations both of the probabilities of life and the value of money. We will take for a basis the Carlisle table. The average future life of a person aged 30 is estimated at 34 years and 4 months; we take for granted this remainder of life for a person 30 years of age, and calculate the value of money to be paid at his death. If he died previous to that period, the assurers would lose by the engagement; and if he survives it, they would be the gainers.

If, however, an office could give the full effect of average, the general law affecting human life would prevail, and the losses by premature death would be counterbalanced by the payments received from those whose lives are prolonged beyond the period calculated by the tables.

The profits of assurers would thus depend on the generalising effect of average, not of the law of chances forming the legitimate source of profit to Life Offices.

THE VARIOUS FORMS OF LIFE ASSURANCE.

Assurance of a sum on a person's own life is the simplest though not the only useful description of assurance. It is practicable for persons to assure on the life of others, provided there be a pecuniary interest present or prospective, dependent upon their having, and co-extensive with the sum assured. Cases of this kind are frequent, as where property is held by a life tenure, when the receipt of an annual income depends on the life of an individual, or where the expectancy of property is limited by the contingency that one person shall outlive another. A person may also assure a sum on his own life, receivable on his attaining a certain specified age; or, should he die before that period, to be paid to his family.

Another form of Life Assurance is the granting annuities, which may be immediate, and to continue the remainder of life, or deferred; that is, to commence at a certain future period. Annuities may also be payable during the continuance of two or more lives, and to the longest survivor, as may be required.

Life Assurance, however, is not confined in its operations to family provisions. Wherever there is a benefit or a loss dependent upon human existence, Life Assurance will enable a person interested in either the one or the other to secure the benefit, or avoid the loss. Thus, the purchaser of an annuity on the life of another may secure the repayment of the purchase-money. The holder of a lease on lives may provide a fund to pay the fine, or renewal, or increased rent. A creditor can secure his debt. A borrower may provide for the repayment of a loan.

Persons engaged in partnership may protect themselves from the loss frequently sustained by the sudden withdrawal of capital on the death of one of the partners. A joint assurance effected by the partners at the charge of the firm, will secure the capital invested.

The same principle is equally applicable in every case where property is to be ultimately acquired; and there is scarcely a pecuniary operation in which the system of Life Assurance may not be beneficially applied. Life Assurance may also be applied to invalids, diseased and declined lives.

Very few Life Offices will accept proposals relating to any other than what are termed unexceptionable lives; that is, where there is apparently no constitutional infirmity or liability to disease. There are numerous instances, however, where persons possess, from childhood, an enfeebled constitution; others have an hereditary predisposition to disease; whilst others suffer from congenital or accidental deformity, the effects of climate or derangement of particular functions, which cause serious inconvenience without materially endangering life. In these and many similar cases, where persons are always ailing, but are never seriously ill, they frequently outlive their more healthful and vigorous contemporaries. Whilst it would be a great hardship to exclude the class of persons just referred to from the benefits of Life Assurance, there exists no necessity for doing so, the statistics of malformation and of disease affording data equally safe for assuring the lives of persons labouring under almost every malady as those of perfect health.

DISEASED LIVES.

The science of statistics has within the last few years been so successfully applied to the duration and mortality of disease, as to place the application of Life Assurance on diseased lives on as secure a basis as even that of healthy lives. In fact, the risk of assuring the lives of persons labouring under disease, must from its own nature rest on as satisfactory a basis as those which regulate ordinary assurance.

Applying the system of assurance of diseased lives to the transactions of an Assurance Office is highly essential to the interest of this class of persons, who, from defect of health, are excluded from the benefits offered by the existing Life Offices. We have shown that the *data* collected are such as to afford the utmost confidence in the safety of its principles, and from the materials on which its calculations are founded we consider that, with due care and discrimination, the risk is not greater than that of an ordinary assurance. Nevertheless the high rates of premiums demanded for persons labouring under disease are an obstacle to persons assuring, who would be desirous to avail themselves of the benefit of the system. It frequently happens that the person to whom a policy of £500 or £1,000 would be a most desirable object, cannot afford to lay out about £30 or £60 per annum, which is the premium required on a life aged thirty years.

There is little doubt that the charges for assurance on diseased lives are disproportionately high, and that there might be a very material reduction, and yet great profits made. These excessive charges appear to be a great

oversight on the part of those who profess to assure diseased lives, when it is recollected that the proportion of invalids to persons in sound, or assurable health is more than two-thirds of the population; and from which there is every reason to suppose that if the advantages held out to invalids of effecting assurances upon equitable terms were of a corresponding advantage such would meet with general support.

DECLINED LIVES.

The operations of most existing societies confine their assurance to persons in full health, and reject all but what they designate "select lives;" that is, lives which they consider will attain the expectancy. Under this system, all persons of weakly frame or delicate constitution, persons in whose families disease is supposed to exist, are as a general rule precluded from assurance, two or three companies only professing to undertake the risk upon receiving an arbitrary imposition of extra premium, which few would consent to pay. But before proceeding to develop the particular features of this new system of assurance, it is necessary that the custom of existing societies with regard to doubtful lives should be clearly understood; and to exemplify this we will instance a case which actually occurred in practice.

A gentleman, aged 27, having occasion to effect a policy for £1,000, made proposals to two established offices, and by both was rejected, not on the ground that he was labouring under any disease, but merely that it appeared from his written answers to the routine questions, that predisposition or liability to disease might be inferred, from an accident he had met with some years before. This, in the opinion of the medical officers, placed his life within the category of "unsound."

This gentleman consequently applied to an office professing to receive diseased lives; although the medical examination declared him to be perfectly free from actual disease, the medical officer recommended the life to be taken at an advance on the usual premiums. The pre-

mium payable for a healthy life of that age was about £20, but an advance premium was demanded of £67, being the rate usually paid on the life of a person aged upwards of 60 years. At the great majority of existing offices this life would be uninsurable; and at those offices which would entertain the proposal the assured must pay a premium equal to that payable by a person aged 60; the premium, too, would be payable for life unless the assured proved to the satisfaction of the Assurance Company that he was in such a state as probably to attain his full expectancy of 36 years, which only would entitle him to any reduction in the premium.

It is well known to all who are conversant with the details of Life Assurance business that thousands of lives are annually rejected who are neither diseased nor have a strong tendency to disease, and which, in many instances, may be taken as average lives, or as lives but a small fraction below the average. The difference in value between a "declined life" and an ordinary life may be effectually covered by a uniform increased rate of premium. The advantages of assurances of this kind are evident from the fact that upwards of 23 per cent.* on the lives insured are annually rejected.

The very large proportion of lives thus declined are not unsound lives, but are rejected on the grounds that the proposed life is a trifle below the average. In such cases the proposed assurer becomes one of the "declined lives," and is generally compelled to resort to offices which insure diseased lives at extravagantly high rates of premium.

Experience proves that Assurance Offices can undertake

* F. G. P. Neison : " Vital Statistics."

to insure the lives of confirmed invalids or diseased persons at moderate and equitable rates; consequently, the practicability of assuring the lives of those persons who have not even a tendency to disease, but are merely declined by other offices, may be deemed eligible after a careful medical examination, aided by the testimonials of persons acquainted with the habits and constitution of the party proposing to assure.

It is evident, therefore, that assurances may be effected on such "declined lives" as the medical officers shall consider to come within a class, the risk upon which lives to be covered by one fixed extra rate of premium. But it is necessary that such extra rate should not be a permanent tax, but all lives so assured should be allowed at intervals of twelve months the option of a re-examination by the medical officers of the society, with the view of ascertaining if the causes still exist which led to the increased scale of premium. If the causes have become removed, then such lives ought to have a reduction of the premium to the same rate as would be applicable to an ordinary life of the age of the assured at the date of his policy. It may readily be believed that persons declined by other offices would gladly effect assurances with an office of this description, and that it would present a very large and legitimate source of business.

VALIDITY AND NON-VALIDITY OF LIFE POLICIES.

The defects of Life Assurance have been placed in so strong a light by the circumstances of recent decisions of the courts of law that the interests of society force the consideration of the subject on public attention.

The insecurity afforded by the present state of the law to the widows, orphans, and representatives of those who may have insured their lives as a provision for their families, has been a constant obstacle to the progress of Life Assurance, and the uncertainty which has hitherto attended the rights of policy holders, the vexatious delays in the settlement of claims, extorted compromises, and protracted litigations, have had the effect of deterring many persons from resorting to life policies as provisions for families, or as security in pecuniary transactions.

The object of these observations is to point out the risks to which the assured are exposed, and to show in conducting the business of Life Assurance the absolute necessity of answering and fulfilling the conditions of a policy in a rigidly strict and honourable sense, and of paying in full every policy which may become a claim, and of guarding against seeking to overstrain any point of law, or trusting to any legal quibble or technicality.

An assurance is a contract whereby the assured undertakes to pay the premium regularly, and the

company to pay the stipulated sum three months after death; provided that "every statement, declaration, and all testimonials and documents addressed to or deposited with the company in relation to the assurance, shall be found to be in all respects true." These statements are held as warranted, and taken as the basis of the contract; so that the policy shall be void if any "important information" has been omitted.

The effect of these clauses, and the consequences resulting from them, have been determined by decisions of the courts of law and by institutional writers, who have decided that an error in a policy, or in the information given to the office, however innocent or unintentional, has the effect of vitiating the policy; and the records of law prove that advantage may be taken of the assured in such cases, when from the distance of time and the death of the person whose life was assured, there do not exist the means of proving the facts relating to the granting of the policy; consequently the public must ever remain ignorant of the nature and extent of the compromises which persons assured have found themselves obliged to make rather than risk litigation.

It is competent for parties to make their contracts dependent upon any conditions which the office may suggest—"Whether the portion of a warrantry eventually discovered to be incorrect or not complied with be material or wholly immaterial with respect to the nature of the risk, the result will be the same; and when the truth of the facts is positively alleged, and not limited to the knowledge of the assured, *although a mis-statement may have arisen from the most innocent mistake, or from false information afforded by others, or mere inadvertence, the*

assured will be in the same position, as to legal remedies in the contract, as if he made the most wilfully-fraudulent averment."*

It is not enough that the proposal and declaration made by the assured are objectionable. The friend's report and that of the medical referee are regarded by law as statements of the assured party, although most of the circumstances stated by the persons applied to can be known only by collateral evidence, or as matters of opinion; and the answers to questions relating to such matters cannot be expected from the proposer, the friend, the medical attendant, and the company's medical adviser to be in perfect unison. The policy is so prepared that the assured enters into a contract that these statements are, in fact, literally true, although he never wrote them, nor had a knowledge of the statements made. Such an engagement being in legal language a warranty, the effect of a warranty "being in the nature of a condition to be performed by the insured, before he can demand the performance of the contract on the part of the insurer, being once inserted in the policy it becomes a binding condition on the insured, and unless he can show that it has been strictly fulfilled, he can derive no benefit from the policy."† The very meaning of a warranty is to establish the assurer's responsibility, and the obligation undertaken by the office effectual, only if any untrue statement (whether the assured was aware of it or not,) be contained in the

* Dowdeswell on the Law of Fire and Law Insurance, p. 35.

† Marshall on Insurance.

proposal or declaration relative to the age, state of health, or other circumstances affecting the life assured, the policy shall become void, and all the moneys paid on account thereof forfeited. The claimant of a policy is required not only to warrant the facts alleged in the statement to be literally as they have been represented; but also to prove that the age did not exceed the age stated in the proposal. The hardship and injustice to the assured that a policy should be completed in the mere declaration as to age, when the party is alive who can so readily prove it, and afterwards to require his executors to prove a fact of which they may be altogether ignorant is sufficiently obvious. The office receive premiums, grant bonuses in respect of such a policy, offer to purchase it, and in every other respect treat it as a valid policy, and afterwards dispute its validity. Such a policy of assurance is an incomplete instrument, and affords no certain means of provision for a family or of security for a creditor.

The effect of the preceding doctrine of law is this—that the owner of a policy cannot recover, unless he can make out affirmatively, to the satisfaction of a jury, after the assured is dead, that he had not had at any time, from infancy upwards, all or any of the diseases, or symptoms of diseases, mentioned in the proposal, upon which the office may raise an objection—in fact, that as the law now stands, the claimant in an action on a policy is in effect put to the absurdity of proving the affirmation of a negative proposition.

The consequences of this are very important, when applied to the validity of life policies, for few persons die by the natural exhaustion of life. Persons are

generally taken off by the force of a known disease,* and it has been the practice of offices, after the death of the assured, to connect that disease with some ailment unknown to the nearest relatives, medical advisers, or the patient himself before the date of the policy; and to invalidate a policy on such grounds is, in fact, a fraud upon the assured.

Medical investigation cannot define the precise limits of perfect health, the scale of charges for premiums is on that very ground calculated and fixed by an average, not by an individual standard of mortality. Premature death, therefore, is an actually recognised risk; the *onus* of detecting imposition rests with the office, and a failure in establishing a charge of fraudulent concealment or misrepresentation must consequently be injurious to their character and prospects.

The assured, in addition to the usual questions contained in the forms of proposal, which he answers to the best of his knowledge, refers the office to his medical attendant and a friend; and the information derived from these parties, involving different series of questions, are placed in the keeping of the office with the other papers connected with the case, but are not shown to the applicant.

Although the office have the means of satisfying themselves from medical examinations, reports, &c., the question whether there is an assurance or not still remains open as against the assured, and no degree of caution on the part of the assured, or of investigation on the part of the office before granting a policy will prevent the com-

* Lord Mansfield, in the case of *Willis v. Poole*, 1780, says—"We are all born with the seeds of mortality in us,—a man subject to the gout is a life capable of being insured, if he has no sickness at the time to make it an unequal contract."

pany from disputing the payment after death. Even the admission of the fact that the assured was at the time of the policy in good health will not preclude the office from taking advantage of any questionable answer given by the assured, under a misapprehension of the meaning of any one of these queries, and that, too, at a time when his explanation cannot be obtained.

It will no doubt be in the recollection of the reader of the extraordinary nature of a litigation of a life policy tried at Warwick, 1846. The subject of dispute was a claim made on an office of the highest standing in London, and resisted by that company. A policy had been effected a few years ago on the life of a person who had since died, and the office received the stipulated premiums during that period, declared bonuses in respect of this policy, offered to purchase it, permitted it to be transferred to a purchaser, which they acknowledged, and in every respect treated it as a valid policy. When his representatives demanded their claim, they were met by an allegation that the office had become absolved from all liability, by some error in the original contract, but refused to inform the claimants under the policy their reason for objection to pay the money without litigation.

The history of the case is this, that the company attempted to prove that the assured had spit blood before the policy was effected. Spitting blood is a symptom of consumption, and the directors were not convinced by the verdict of three juries that they were wrong. A medical writer, in remarking upon this case, says,* "we apprehend that very few people pass through life without spitting blood some time or other; very many people in

* *Medical Times*, August 15, 1846.

certain states of dyspepsia, or disordered general health, are as subject to bleeding from the gums, the mucous membrane of the mouth, the fauces, or the tonsils, as others suffering from determination of blood to the head are liable to bleeding from the nose; and if an ignorant bystander see a man spit blood under the circumstances above mentioned, or after having picked his teeth, or chafed his gums, is to report the poor fellow the victim of hæmoptyses, and on this solitary ground an exception is to be taken to the validity of his assurance, we expect very few would be safe.*

This is not an isolated case of companies attempting to evade payment of policies on technical points of law, for the public will doubtless remember that similar defences have been set up by various offices to claims of similar character. This company was remarkable for having displayed an extraordinary energy in alleging misdirection of the judges, and in endeavouring to save its funds from the just demand of the claimants—three actions were brought and three verdicts returned against the office on this single policy of insurance of £2,000.

* We knew a man refused admittance into an Insurance Office—despite the testimony of his own surgeon, and of the physician to the institution in his favour—merely because one of the clerks of the company deposed to having more than once seen the poor fellow spit blood. The fact was, they were in the habit of smoking a pipe together occasionally at the same tavern, and it was the custom of the individual in question to pick his teeth after having finished his tobacco, and that little dental operation was generally followed by loss of blood from the gums. The case of the sufferer was hard enough, for not only was he refused admission into the office in question, but the other offices in the town hearing of his rejection by the one aforesaid, refused him also, and he was therefore left utterly without the means of making the provision he desired for his wife and children.

It might have been imagined that a just interpretation of a contract would have been all that a public company would desire, but here we have an instance of a determination to reject the opinion of three different special juries upon the facts, so long as there was a technical objection for evading a moral binding engagement.

The decision in this case will it is hoped induce the public to protect themselves by a careful selection of the office, and to avoid such offices who, as in this case, pertinaciously resist the claims to which they are liable. Although successful throughout, the costs in this action were thrown upon the claimant, and amounted to more than £2,000, the sum in dispute; consequently, after the success of this lengthened investigation, the claimant lost money by the purchase of the policy. It is calculated as part of the loss towards the office will be the "unfavourable impression" that must be created in the public mind by the fact that, after two adverse verdicts, this office made a third unsuccessful effort to resist payment of what a third jury had decided to be a just demand.

The preceding objections are applicable to the present system of Life Assurance, but offices have recently proposed to limit their objections to policies on the ground of fraud only; this leaves the question of the validity or non-validity of the policy necessarily in the same position as it would be without any such limitation, and exposes a claimant to all those legal objections which may be brought to bear upon a policy, inconsistently with a due regard to justice, and places an office in a situation to litigate successfully with a claimant without alleging fraud. This promise does not afford any guarantee that the sum assured will be paid, nor any stipulation that the directors will not relieve themselves from the claim upon grounds

which do not impute deceit or improper concealment on the part of the assured, or drive his widow and orphans to compromise on most unreasonable terms.

Some Assurance Offices have assumed the right under their several contracts to repudiate all policies and the premiums paid on the lives of those who die by suicide, duelling, or the hands of justice, or upon the high seas, without licence from the company, excepting it occurred in travelling from one part of the kingdom to another; all of which are accepted in the policy, together with all the premiums which may have been paid. These risks form part of the very elements of, and are taken into account in, the valuation of human life, and as such they are invariably charged for in every scale of rates, and being included in every table of mortality upon which premiums are based and graduated, upon what just plea, therefore, can they be made the grounds for not returning the premiums? In some cases offices are induced to restore to the widows and orphans a small portion of the accumulated premiums, which is, in fact, their own funds. In other instances, if five annual premiums had been paid, or a sum equal to that, the office would have purchased the policy at the time of the death of the assured; but this is dependent upon the discretion of the directors, and is not subject to any fixed rule.

This is most unjust to the relatives of the assured, for the survivors are entitled as a right to receive back the premiums paid on policies on the lives of those who have not died a natural death, and to offer less appears not only to be taking undue advantage of the death of the assured, but is unworthy of a just and honourable institution.

The objections which have been stated prove that the

aggrieved party seldom has it in his power to obtain redress from a court of law ; for the claimant is not in possession of the evidence which will regulate the decision of a Court, that being in the keeping of the office ; and considering the preponderating advantages which an office possesses in the absence of the best witness for the claimants—the assured himself ; and in having the custody and control of the documentary evidence, it might be expected that a company would state what were the grounds for disputing the payment of a policy after the death of the assured. Such, however, is not the practice. Thus an office has the power to drive widows, orphans, or representatives of the assured into an unequal struggle for the enforcement of their claims at law, or to force them into a dishonourable compromise.

The records of the courts of law furnish abundant proof of Assurance Companies refusing the payment of a policy, and failing to convince juries that fraud, charged for the first time after the death of the assured, had been practised in obtaining the policies in dispute. But even a verdict in favour of the claimant on a policy of insurance is no security, inasmuch as it is in the power of the office to raise by their pleadings a multiplicity of complicated questions to be tried, and by taking exceptions to particular expressions of the presiding judge, with reference to the particular state of the law applicable to any one of these questions, to deprive the claimant of his verdict and expenses, and succeed in obtaining a second and a third trial, with the same consequences, at an expenditure ruinous to any but a public company. Thus a contest at common law, between the representatives of a person assured, and a public company, as to the validity of a policy of

assurance after the death of the party whose acts are impeached, is unfair and unequal, both with reference to the present state and practice of the law and the relative condition of the parties. The manifest hardship imposed upon persons who have effected policies of assurance upon their lives, to be paid at their death, in consideration of a given annual or other premium, and on those who may have become entitled to policies by transfer or otherwise, might be exemplified by reference to numerous decisions of the courts of law, which would, however, give an inadequate idea of the evil effects which have arisen from Life Assurance contracts being made for the protection of the assuring body without sufficient regard to the interests of the assured. It is obvious from the construction of the policy deed, as adopted in practice, that the interest of the assured is left wholly unprotected; and the rules of law, as applicable to the contract now in use, are sufficient to prove the hardship to persons whose industry and economy had been exerted to procure, by means of Life Assurances, a competency for their families, involving widows, relatives, and creditors in unexpected penury.

Life Assurance under the protection of such a law is a delusion, and becomes a snare, affording facilities to invalidate a policy of assurance, and render it valueless, as a negotiable instrument of security; and the system now adopted is sufficient to prove that a complete change is required in the practice of Life Assurance to afford justice to the assured.

We have no data to enable us to enumerate all the litigated cases on Life Assurance, or the extent of the number and magnitude of abandoned and compromised claims; but the numerous decisions of the courts of

law induce a well-grounded belief of the hardship and injustice of the present loose practice in granting assurances in place of strict inquiry being made before the assurance is completed. It has become the practice to grant policies without investigation, and put off the duty of inquiry until the claim arises.

In commenting on the details of a litigated case, a daily paper remarks:—"Less than half the trouble taken after the death of the assured in this case would have been sufficient during his life to have settled, without the necessity for the expense of an action, the question of his being healthy or in a state of disease."

This state of matters has inspired such confidence in offices of the highest standing that in many instances references to friends and medical attendants are not required when the company's medical report is satisfactory.

The warranty facts, the accuracy of which must be substantiated to the letter of the representation, which in all material points must be proved to be true before a policy can be made effectual, are such that offices are so satisfied with the security of the warranty clause as to give themselves no trouble to ascertain the state of health or the nature of the habits of the assured at the time of effecting the assurance. A pamphlet, in a popular form, has been published, entitled, "Defects of Life Assurance," in which it is stated that—

"An Irish agent of one of these offices was not allowed to give a fee to a medical examiner; and applicants for assurance, after signing their proposals and declarations, used to be told that nothing more was wanted but a

* *Times*, March 10, 1846.

medical report, which they might procure from whom they chose. Medical reports, suited to the wishes of the applicants, were of course procured and forwarded to London, and policies were returned: the more erroneous the reports, the more easy would it be for the company to free themselves of their obligations to pay. The premiums would be paid as they became due, and the policies might become the property of persons who had paid for them, as if they were valid documents of security, truly representing the sums assured.

“If the assured life in such cases happened to continue the average number of years, the policy would be paid when the claim arose; if it happened to drop early, the usual inquiries would invalidate the policy, which was really worth nothing but what the company might be pleased to give for it. To regard such a document as a deed of security would be preposterous. But further it has been found that some offices increase the number of the warranted facts* to such an extent that unless the person assured had been in every respect perfect, both in body and mind, the policy is void.”

Life Assurance, under such a system as this, not only entails disappointment and loss in place of the blessings which, under proper regulations, it is calculated to confer, but opens a wide field for direct temptation to offices, not of the highest character, to relieve themselves from the

* A Scotch office of the highest standing announced at an annual meeting, 1845, that the company had never had a law suit. A perusal of the warranty clause, and the terms used in their policies, will explain that fact; but they will not venture to affirm that they have paid in full all their policies, never repudiated a policy, or refused to pay a claim, or been compelled to pay by an award of an arbitrator.

obligations which they have undertaken, by taking every advantage which the technical rules and forms of law will permit. We are led irresistibly to the conclusion that under such a state of things the claims annually abandoned, and the extent of the compromises that occur in place of law suits must be numerous, although they ever will be unknown to the public. A highly-respectable office stated that they never disputed a claim, but they have ceased to employ that style of advertisement since March, 1848, when they disputed a claim for £5,000. The case was settled by compromise, the company paying £3,500 in place of £5,000. There was no public trial, no report of the case in the law books, or newspapers, and the office saved £1,500. How many claimants are reduced to the alternative of succumbing to tyranny and injustice, receiving a partial instead of a full payment of a policy rather than risk litigation? The history of Life Assurance contains too many examples of cases of hardship and injustice, arising from the unequal position of the contracting parties—a powerful company on the one hand, and an individual generally of moderate means on the other.

As an example of the manner in which the business of Life Assurance is conducted, the public should be made acquainted with the insecurity of life policies to persons effecting assurances on the lives of debtors, and the mode of business which rich and powerful associations adopt as a means to relieve themselves from the obligations by forcing claimants to abandon policies under circumstances of extreme hardship whose assurances are dependent upon the lives of individuals. We relate a case of an old-established company, whose capital consists of its ac-

cumulations from premiums received on policies which they have granted.

This company repudiated a policy on the ground that the assured had gone beyond the prescribed limits, and that, consequently, his policy was void. This was the case of an individual who assured the life of a debtor, and paid the stipulated premiums for some years. The person whose life was assured went out of Europe, and died, but his death was not caused either by the voyage or climate; neither was the claimant aware of his debtor's having left England, or of his intention to do so, when he effected an assurance on his life; although the claimant immediately offered to reimburse the company for the extra risk, which in reality did not exist, the board rejected his claim, and the complainant was compelled to abandon his policy.

It is proper to state that a modern Life Office had paid claims of greater amount than his demand on policies on the same life, containing the same restrictions as to foreign residence; and it is important to observe that by the regulations of this office a whole-world policy was not granted as in modern offices, on payment of extra premium, therefore no assured could depend upon getting payment of his debt from them, which renders their policies totally worthless as securities.

The very serious consequences arising to persons assuring the lives of debtors, who may at any time, by going beyond the prescribed limits, render their creditors' policies valueless, unless offices allow a general leave, or whole-world policy, on payment of an extra premium, varying with the circumstances of the case. The injustice of such a case to individuals, and which has the effect

of detracting from the value of policies, has frequently occurred to members in old-established offices. It often happens that there does not exist the remotest suspicion of the party's going abroad when the policy is taken out, and the consequence is, that if the assured has gone beyond the prescribed limits, the policy is void. The conclusion at which we arrive is, that an office which declines to adopt the system of general leave, or whole-world policies, on payment of extra rates, at the time of assuring the policy, should cease to grant policies dependent on the lives of others, as such policies being valueless as negotiable instruments of security, their value is materially diminished, for the public are reasonably deterred from applying to such offices for assurances.

The term "Assurance" must be considered a misnomer as applied to those companies in which the practice of compromise, or non-payment of policies, is adopted. A person is said to be "assured" because it is made quite certain that if so much is paid by way of premium, so much money will, at his death, be available for his representatives. What "assurance" can there be for an individual who takes out a policy in an office which, after receiving the annual premium during his life, refuses to pay the sum agreed upon when it becomes the turn of the company to perform its part of the contract? We do not hear of cases in which Insurance Offices decline accepting any further payment from persons suspected of having given false information as to the state of health, though it is obvious that such falsehood could be investigated much more readily, and might much more easily be ascertained in the life time than after the death of the party charged with the mis-statement. It is unjust to question the

technical accuracy of a claim when the intentions of the opposite party have been honest, and no fraud attempted by the claimant. Even if, through error, an individual may have suppressed some fact of the existence of which he might not have been aware at the time of making the declaration, preliminary to insuring his life, such a mistake ought not to be taken advantage of to vitiate a policy.

It is believed that this system of repudiation has been productive of great benefit to the companies adopting it, as some offices have increased their surplus premiums considerably by avoiding the payment of claims of the representatives of an assured party, if it was possible to do so; but transactions of this gross and flagrant character will ultimately operate on offices that are disposed to litigate, and eager to avail themselves of every advantage of any flaw in the legality of proceedings, against the truth and justice of the case. Assurance Offices look to the living for support, and the public will be certain to avoid those offices which are in the habit of throwing obstacles in the way of the payment of the sums that had been assured, and they will not be disposed to peril the future provision of their family on the chances of law, and will be cautious against effecting policies in offices which take every advantage of the error or ignorance of the assured, when it is the turn of the company to pay instead of receiving.

The question as to the validity of policies is made to rest upon the point how far the interests of an office are likely to be advanced or deranged by law suits. It may be urged that the company's own interests are sufficient to prevent them from appearing before the public as

litigants, or that the disputes with Life Companies have not been so numerous as to induce a well-grounded fear of litigation in lieu of payment. The facts which we have already adduced appear to show that their interests are promoted by disputing policies, because the assured, who are in all cases less affluent, are often totally unable to maintain a claim in a court of law, and the conduct of Assurance Offices has been influenced by that consideration. The publicity given to assurance trials must necessarily have the effect of preventing assurers from resorting to that office, and therefore the interests of that company must be affected seriously; but the fact of a company resorting to courts of law being known to the assured, enables the office successfully to reject claims, or to compromise them with more facility. In this respect law suits are conducive to the interests of the company.

The conclusion at which we arrive is, that an office which regards public opinion, and is desirous to promote the interest of the policy holders, ought to be governed in their mode of business by an honest principle to the assured, and to abstain from litigation rather than seek the notoriety of judicial proceedings, and grant indisputable policies. The fact that the assured has completed his part of the contract by the payment of the stipulated premiums for the purchase of a certain sum of money to be paid at his death to his representatives being admitted, it is but fair that the insurer should complete his portion of the contract; which consideration ought to be sufficient to form an inducement to an office to avoid law suits. It may be assumed, on the one hand, that to those companies more interested in the settlement of claims than in adding to

the number of assurances, it may be an inducement to litigate claims; while, on the other hand, to modern offices, seeking business, it would be beneficial to renounce all advantages derived from the strict rules of law. Indeed, if the pure question of interest be considered, it would be found that all offices would best attain their objects by paying all claims due under their policies.

We do not for a moment believe that offices would reject a claim unless they supposed that fraud had been practised upon them. Boards of directors are bound to protect the interests of the company. These interests are defined by legal documents, and every claim upon the company's funds requires from the board an investigation of the documents upon which the policy was originally granted. In giving full effect to the terms of the policy, or rejecting claims, they frequently have the imputation of committing acts of tyranny and injustice when the indignation cast upon them ought to be directed against the system, which throws discredit upon the claims of the assured. It is evident that this imputation upon Assurance Companies forms a sufficient foundation on which to establish the justice and advantage of indisputable policies. It is to the interest of an office to have the reputation of not being disposed to litigate claims, and for the sake of that reputation to refrain from raising questions in which they would probably be successful. Would it not be for their interest, rather than incurring the risk of acquiring the character of litigiousness, to be able to inform the world that this reputation was based, not upon the character of the office, but upon an unalterable element in their own constitution, that they are prohibited from raising such questions?

The only consideration that arises is as to the mode of testing the honesty of the assured, so as to ascertain what guarantee the company have against positive fraud. It is urged that if Assurance Companies were deprived of the power of disputing policies they would be left at the mercy of every description of fraud, which might seriously affect the stability of the office. Admit for the sake of argument that policies may sometimes be fraudulently obtained; but would it not be more equitable to the assured, and conducive to the interests of an association, to remove the uncertainty and positive risk, and give full scope and development to the manifest advantages of Life Assurance, and to satisfy the public that a policy of assurance shall have an indefeasible value affixed to it, so that it can be used as a provision for a family, or as a negotiable instrument of security in all pecuniary transactions? The objection that it would be unsafe for Assurance Companies to make their policies indisputable has no foundation on principle, and would be fatal, if well founded, to every system of assurance, which to be ultimately beneficial to the assured cannot fail to be safe to the assurers. Experience demonstrates that objections greatly overrate the danger—if we estimate roughly (for we have no data for calculation on the subject) the small number of life policies which can have become claims since the beginning of this century, and compare the number of reported trials, it will be found to bear a very small per centage.

Every policy of assurance should be liable to depend upon the issue of an inquiry. All the facts regarding a man's present state of health and habits can be discovered on proper inquiry now; and the office should not have the power to say after the assured is dead that the policy was

effected by fraud and misrepresentation, but ascertain the facts while he is alive. By exercising caution in taking the risks the office would protect themselves from the remote danger of fraud, and would not abuse the power which a rich and powerful association possesses over poverty in such a struggle as that of disputing just and equitable claims. A life accepted and the policy once granted by the office should ever afterwards be unimpeachable.

The value of a policy is injuriously affected by every doubt which can attach to its ultimate validity. This is, in fact, a fraud upon the assured. The very object of a policy of assurance is that the amount stipulated shall be paid at the death of the assured; when there is any doubt as to the result it is a contradiction in terms.

A company which is prohibited from disputing a policy once granted will take sufficient care to ascertain the real state of the risk before granting the policy.

The principle of the indisputability of policies is the only one deserving the name of assurance, and there is not the slightest reason why Life Offices should avail themselves of the strict rules of law to dispute any policy they have granted; and clauses to that effect have already been approved of by the Registrar of Joint Stock Companies. Life Assurance under proper regulation would be a blessing to society, and one of the greatest advantages, as it is one of the highest refinements of civilisation; but the evil of litigation, such as we have described, bids fair to render it "a mockery, a delusion, and a snare."

It is only due to the assured, the creditors in the case, that Life Assurance Companies insert in their deed of settlement a clause prohibiting them from disputing any

policy they have granted, abolish the warranty clause, and grant unrestricted policies. From what we have stated it will appear that to litigate a policy of assurance is not only unjust to the assured, but pernicious to the interest of the company, and that a society founded on the principle of indisputability is at least as secure as any other company.

CHAPTER V.

ORIGIN, PROGRESS, AND DEFECTS OF FRIENDLY SOCIETIES.

TOGETHER WITH THE RATES OF MORTALITY AND COM-
PARATIVE VALUE OF ANNUITIES, ACCORDING TO THE
TABLES OF CHARLES ANSELL, ESQUIRE, AND F. G. P.
NEISON, ESQUIRE.

THERE is probably no more satisfactory evidence that as the human mind is cultivated and improved, prudence and providence are increased; and that knowledge is becoming daily diffused among the labouring classes in this country is apparent from the fact of the present increasing desire they evince to make such provision, by their own honest industry, through the medium of Friendly Societies, as will avert the misery which poverty adds to the bed of sickness, to the infirmities of age, and to the hour of death.

The foregoing appear to be natural and direct inferences, and the truth of them cannot be questioned by those who have had the most extensive experience on the subject of Friendly Societies; for such persons would not hesitate to confirm the assertion that the members of Friendly Societies are generally the most intelligent, sober, steady, and

trustworthy men of their class in their respective neighbourhoods.

The following observations on the progress and present state of Friendly Societies, which have been distinguished for their magnitude, and excited so much interest among the provident members of the working classes, are published with a view of extending a knowledge and inducing the adoption of Life Assurance more widely amongst the industrious and working classes of the country, to enable them to embrace the comforts of a just and merited reward of their honest and industrious savings, as the only means available to the working man of providing for the comfortable support of his family.

The advantages of associations similar in their nature to friendly societies seem to have been appreciated at a very early period; and it is probable that associations which had for their object to provide for the necessities of the few by the contributions of the many, were numerous prior to the Norman Conquest. In the year 1066, although the art of printing was unknown, and the scarcity of authors in that period had prevented the existence of many such institutions being recorded, some curious information respecting the ancient history of these associations for mutual support, formed among the middling and lower classes of society, is contained in Sir Frederick Eden's "*History of the Poor*:"*—"The guilds or social corporations of the Anglo-Saxons seem, on the whole, to have been friendly associations for mutual aid and contribution, to meet the pecuniary exigencies which were perpetually arising from burials, legal exactions, and other

* Vol. I., page 590.

payments or compensations.”* At what period of time friendly societies in their present form arose, it might be difficult to trace ; but no legislative interference or regulation with respect to friendly societies occurred until the year 1793, when the act was passed which is known by the name of its author, Mr. George Rose. Since that period thirteen others have received legislative sanction.

Between 1793 and 1846 a large number of friendly societies have been instituted. In 1802 no fewer than 9,672 appear to have been returned to Parliament ; and in 1815 the members of friendly societies were enumerated at 925,429.†

These provident and self-supporting institutions are upon a very large scale, and it is estimated that the members of friendly societies in the kingdom approximate to one million and a-half of persons, whose annual contributions in the aggregate amount to £1,000,000 sterling.

The societies numerically of importance are the following:—Independent Order of Odd Fellows, Ancient Order of Foresters, Old Friends, Druids, &c. There are several different societies in the kingdom which pass under the name of Odd Fellows. There is the Manchester Unity, a London Unity, a Leeds Unity, a Sheffield Unity, and a Bolton Unity. What is termed the Manchester Unity of Odd Fellows was established in England in the year 1805, and is the most gigantic institution of modern times, embracing at the present time in its various ramifications throughout the kingdom, upwards of 4,000 lodges, and about 400,000 members ; and its income is

* Sir Henry Ellis.

† Report of the Select Committee of the House of Commons on Friendly Societies, 1825.

above one quarter of a million annually. The members are stated to have increased during the last few years at the rate of 25,000 per annum.

The plan adopted by these societies is seriously defective, as the absence of all security, and the want of experience in fixing the rate of contribution, prove disastrous; and the rules by which they are governed are erroneous and objectionable. The past experience of those who belong to them has proved that through the want of scientific knowledge of the subject their expectations for mutual assistance at the time of sickness and the hour of death have proved delusive in their promises, and a fraud upon their vested interests. The causes which have led to such insolvencies may be enumerated thus:—The adoption of a uniform rate of contribution for all ages, the use of public-houses for meetings and business, and the insufficient rates of contributions in proportion to the advantages offered. The number of societies that have existed long enough to bring the sufficiency of their contributions to the test of experience bears a small proportion to the number that have become insolvent.* In the early stages of such institutions the claims upon their funds are few. They have usually started with members in the prime of life, so that for a time nearly all the receipts appear to be profits; it is only when advancing age, increased sickness, or permanent infirmity, together with the claims for burial money, press on the funds, that it is discovered the original contributions have been inadequate to provide for the benefits promised to the members.

* Mr. Charles Ansell states that the condition of 2,000 societies was brought before him in three years, all in a state of insolvency.

It is shown by mathematical investigation that sickness and disease increase with age; thus a person at the age of 20 is liable to only 5 days' 21 hours' sickness per annum; while one at 35 is liable to 6 days' 21 hours'; and at 60 to 4 weeks' 1 day 4 hours'; and as there is a graduated scale in the probabilities of sickness, the rate of payment should consequently rise in the same proportion. It is therefore evident that a scale of unjust rate of contributions could only lead to insolvency, as the increasing years and infirmities of the members would absorb all the funds, and leave the survivors destitute.

A numerous class of friendly societies hold their meetings for business at public-houses, and many instances might be adduced in which men of steady and religious character have contracted habits of intemperance which have occasioned the loss of reputation and led to a premature grave.

In addition to the moral evils resulting from this practice, is the unnecessary expense incurred in conducting the affairs of these societies. The positive waste of money arising from this very frequent but objectionable practice, is greater than, without examination, would be believed. It is thought that not fewer than 1,000,000 persons in this kingdom are members of friendly societies, and probably each person does not on an average spend less than 5s. per annum at the monthly meetings and yearly feasts. The annual expenditure for what is in many cases a worse than useless purpose, will therefore not fall short of £250,000.* A sum of 5s. per annum for each member of a friendly

* Charles Ansell on Friendly Societies, page 136.

society is vastly more than sufficient to defray the society's ordinary and necessary expenses of management.*

In a pecuniary point of view, this circumstance is much more important than most of the individuals concerned are aware. Take the expenses of a single order, and we shall find the amount of saving that would be effected were all its meetings held in private or hired rooms, not connected with public-houses. In March, 1841, there were 2,588 lodges in Great Britain and Ireland, of the Manchester Unity of Odd Fellows. Of this number, 1,254 lodges, containing 95,364 members, then held their meetings on Saturday evenings; the remaining 1,334 lodges, containing 84,181 members, held their meetings on the other evenings of the week. Now, allowing each member of this order to spend only 2d. at each meeting of his lodge for the benefit of the house where it is held, the following table will show the aggregate expenditure of the order, supposing the meetings to be held fortnightly:—

Evenings each Fortnight.	Number of Lodges.	Number of Members.	Fortnightly Expenses.		Yearly Expenses.	
			£	s. d.	£	s. d.
Saturday ...	1,254	95,364	794	14 0	20,662	4 0
Various ...	1,334	84,181	701	10 2	18,239	4 4
Total ...	2,588	179,545	1,496	4 2	38,901	8 4

* A man aged 25 could for an annual contribution of 5s. secure to himself a superannuation allowance after the age of 70, of £10 or £11 per annum; or he might, for such an annual payment, provide for an allowance in sickness until the age of 70 of about 3s. 6d. per week, or for a payment at death of at least £10. These are the advantages which might result from a discontinuance of holding meetings at public-houses.

We are aware that some allowance ought to be made on behalf of those lodges which are held only monthly ; but the deduction necessary on that account is probably more than met by the expenses of extraordinary meetings ; such as lecture nights, committee nights, anniversaries, and other occasions. We should consider that there would be no difficulty for rooms to be hired for the accommodation of this order for £7 per annum for each lodge, inclusive of light and fire. At this rate £18,116 would afford accommodation equal to what now costs £38,901 ; thus effecting an annual saving to the order, or its members, amounting to more than £20,000. The item spent by each separate individual unquestionably seems small, but how many comforts might be provided for the more unfortunate members of the brotherhood, and in how many different ways might the prosperity of the order be promoted by an extra £20,000 being annually placed at its disposal ? We are not attempting to infer that the landlords at whose houses lodges are now established are too well remunerated for the convenience ; so long as they provide the accommodation, they have a right to a sufficient recompense ; but it is obvious that those who are guided by the suggestions of economy will not resort to public inns as the most eligible places at which to hold regular meetings.

But there are other, and much more important reasons than the one just named why friendly societies should not hold their meetings at public-houses. The atmosphere of the public-house is certainly not the most suitable that might be found for the promotion of moral health ; and whilst men are laudably engaged in forwarding those schemes which are calculated to lessen the amount of physical suffering, it is, to say the least, an act of imprudence

to select as the seat of business those places where temptations to immorality too frequently exist. There can be no doubt that of the 175,545 members of the society above alluded to, a great number are frequently led to the public-house, who would avoid it if the business of their order did not call them thither ; and many also, after lodge hours, are tempted to indulge too freely in liquor, who would escape the snare were the affairs of the society managed at less objectionable places. If great advantages would be likely to accrue to a single order by the adoption of the alteration we have suggested, the result would be immensely beneficial were all friendly societies to comply with it.

There can be little doubt that the foundation of habits of general intemperance is frequently laid by men who become members of societies established by interested persons, with the sole motive of benefiting a favoured public-house. Every discouragement should be given to this practice, which induces a habit so pernicious to the interests of individuals and to every ordinary duty of life : a custom not founded on reason should be opposed by every man of sound sense and reflection.

Having briefly glanced at the history of friendly societies, and taken a cursory view of the defects of existing associations, it may be interesting to my readers for me to enter into a minute scientific analysis of the law of mortality, on which depends the whole success and stability of these associations. The development or ascertainment of those laws must affect the consideration of the present question, and it has been of the first importance on entering upon such a subject, to exercise every caution in the determination of the rate of mortality to which the mem-

bers of friendly societies are in general subject; and as that part of the question can be satisfactorily settled, there cannot possibly exist any difficulty in the subsequent progress. It is remarkable that no exclusive information has hitherto been collected as to the duration of life among the lower orders, and it is obvious that neither experience drawn from the higher and middle classes, nor results taken from the army or navy, or from the London hospitals, can be depended upon in reference to the general mass of the manufacturing or agricultural population. The best record as to the rate of mortality among the working classes, is contained in the returns of friendly societies, which form a valuable contribution to our knowledge of the subject, and afford an excellent basis for the calculation of the average duration of the life of man with tolerable accuracy, which has been found to lead to practical results. The persons composing friendly societies are almost exclusively the industrious members of the community, chiefly occupied in the trades and toils of the mechanic arts, and the circumstances in which the working population of the country are placed have generally been thought averse to a prolonged duration of life. The following observations, however, will show that the results of friendly societies give a higher expectation of life among these classes than amongst the general community, and that the average duration of life is greater in the manufacturing districts than in the country, and of higher value than lives in Assurance Companies, as deduced from the tables calculated by Mr. Finlaison, whose results are sufficient to account for the reduction of the scale for the general community so much below the average standard of all classes in friendly societies. Every previous investigation into

the laws of mortality produced the conviction that the lives of the working classes of the kingdom were of shorter duration than those of the upper classes, and also of less value than the average results for the whole population; but here we have a confirmation of the fact that the industrious workmen of the country experience an increased duration of life.

The most favourable life tables hitherto formed have not shown anything so favourable as the results of friendly societies, even among what are generally considered the select classes of society.

We have already shown that during the year 1844, at age 32, the mortality of males for the whole of England and Wales was 1 in 95; in the Manchester Unity* it was 1 in 106; and for all classes in friendly societies at age 32, the mortality was 1 in 128; while for the rural district† it was 1 in 109; for the town district it was 1 in 110: and for the city district was 1 in 102.‡ To illustrate further this point of the inquiry, the following table of mortality for the ages 20 to 60, deduced from the experience of the English friendly societies, shows the average standard of all classes of members, and gives a correct representation of the value of life in that portion of the population composing these societies.

* Amongst 8,000 Odd Fellows residing in Liverpool in 1844, the mortality was 1 in 39; in Manchester, 1 in 41; in Birmingham, 1 in 57.

† The rural district is composed of those places the population of which is under 5,000; the town district of those places the population of which is 5,000, and under 30,000; and the city district of such places as have a population of 30,000 and upwards.

‡ Rate of Mortality, page 34.

***TRADES NOT CLASSIFIED.**

RURAL TOWN AND CITY DISTRICTS.

AGE.	LIVING.	DYING.
20	95,691	648
30	89,360	675
40	82,245	772
50	73,513	1,049
60	60,881	1,525

†TRADES CLASSIFIED.

RURAL TOWN AND CITY DISTRICTS.

LABOURERS—MALES.			CLERKS—MALES.		
AGE.	LIVING.	DYING.	AGE.	LIVING.	DYING.
20	96,342	588	20	94,881	1,039
30	90,677	506	30	77,905	1,704
40	85,451	583	40	65,660	1,238
50	78,861	767	50	52,639	1,326
60	69,219	1,142	60	32,703	2,107

PLUMBERS, PAINTERS, &c.			BAKERS—MALES.		
MALES.			AGE.	LIVING.	DYING.
20	90,508	1,411	20	95,425	501
30	81,432	1,016	30	89,375	843
40	70,974	898	40	83,120	538
50	62,056	1,262	50	66,279	2,339
60	43,439	2,131	60	49,296	1,532

‡ MINERS—MALES.

AGE.	LIVING.	DYING.
20	95,235	690
30	89,122	442
40	83,864	599
50	73,800	1,438
60	54,119	2,896

* Francis G. P. Neison's "Vital Statistics." † *Ibid.* ‡ *Ibid.*

These general results have occasioned some surprise in the minds of inquirers, as they establish the fact that that highly-important and industrious class of men, clerks, stand lowest in the above scale, and that from 20 to 60 their expectation of life is only 75 per cent. of the general average. The expectation of life among plumbers, painters, and glaziers in the same period is equal to 81 per cent., miners 85 per cent., and bakers 88 per cent. of the general average.

Plumbers, painters, and glaziers will be found next in the scale, and, although much below the general average, they are still of considerably higher value than the class designated clerks.

Bakers, as well as the preceding class, have long been supposed to be unhealthy, and although no attempt had hitherto been made before Mr. Neison's "Contributions to Vital Statistics" to ascertain the precise value of their lives, it is considered that the present results show a greater difference than would generally be calculated upon.

The class miners will be found to rank above the three others at the early periods of life, but below them at the later periods of life.

The expectation of life for members of friendly societies is generally higher than that of the whole population of England and Wales, and in like manner it will be observed that the expectation of life among the members of friendly societies in Liverpool is also higher than the expectation for the general population of Liverpool.

In the Fifth Report of the Registrar-General will be found a table of the expectation of life for the town of Liverpool, and assuming that it gives a correct representation of the value of life of the whole population, we shall

find the comparative value of life between the members of friendly societies and the general population to be as follows:—

EXPECTATION OF LIFE IN LIVERPOOL.			DIFFERENCES IN FAVOUR OF FRIENDLY SOCIETIES IN LIVERPOOL.	
Age.	Friendly Societies.	Whole Population.	In Years.	Per Cent.
20	37·9553	33·0000	4·9553	15·0160
25	33·9067	30·0000	3·9067	13·0223
30	30·1437	27·0000	3·1437	11·6433
35	26·5260	23·0000	3·5260	15·3303
40	23·1524	21·0000	2·1524	10·2500
45	19·9908	18·0000	1·9908	11·0600
50	17·0946	16·0000	1·0946	5·6922

The value of life among the members of friendly societies is a very remarkable and important feature in this inquiry, and is a result that, generally, would not have been anticipated either by the middle or higher ranks of society; but if the value of life so deduced from observations of persons having transactions with Assurance Companies be admitted to be a correct measure for such classes, it will be found that their duration of life is not only less than among the members of friendly societies, but also less than in the country generally. It has been stated that the superior duration of life in the ranks of friendly societies to that of the general community apparent in statistical tables is to be ascribed to the effect of "selection;" but reflection will show that the difference must be produced by other causes. Every means is adopted to ascertain the value of the lives admitted into Assurance Companies. The known caution usually exercised in these matters, and the medical talent brought to the aid of the offices, are suf-

ficient protection against imposition, about 23 per cent. of the applicants being the average number rejected. Yet the lives admitted by these companies appear to be of less value than the general average of the country, and friendly societies are known not to exercise the same degree of scrutiny, though they are not without tests for the admission of members; and they possess one advantage over Assurance Companies—namely, that the members and those likely to be candidates are generally intimately known to each other, so that their daily habits and ordinary health cannot be concealed, and where evidently bad health exists admission is refused.

It has been stated that Assurance Companies are likely to have proposals more freely from unhealthy persons for sums payable at their death, but that proposals for annuities or sums payable during life will be made on the lives of the most healthy. Mr. Finlaison, in his Report on Life Annuities, in March, 1829, and on the lives of the nominees of the Government Tontines and Annuity Schemes, shows that assured lives are of greater instead of less value than those of annuitants, but that the males' lives selected for the Government Annuities are not only of less duration than the male population of the country, but are actually shorter lived than the members of friendly societies. The facts upon which his observations are founded are derived from calculations of the lives of nearly 25,000 persons during a period of more than thirty years, containing the expectation of human life as it is now, and as it was a century ago. They possess every advantage that could be desired, and considering the acknowledged skill and care with which the computations were made, the Government table must be entitled to the highest confi-

dence, and the "expectation" of life thence deduced regarded as the true measure of life in that particular class of society to which it refers. It is evident from those results how inadequate the means of selection usually resorted to are to raise the standard of life above the average of the country. It is clearly shown by the evidence derived from Assurance Companies that the duration of life amongst the middle and upper classes undergoes gradual deterioration, and that just as life becomes more valuable by the possession of wealth and the advantages it confers, its opportunities and charms of enjoyment are lessened; and the inferior standard of life amongst these classes may be traced directly to the luxuriant and pampered style of their living, arising from their artificial habits, which interfere with the nature and degree of those physical exercises which exist among the working classes of society, and are productive of long life. Viewing the value of life in the highest ranks of society—viz., the peerage,* it will be perceived that the expectation of life is not only less than in the general community, but also very much below the measure of life amongst the members of friendly societies. The consideration of what has been advanced shows that the vitality among the members of friendly societies cannot be attributed to the superior mode of the selection of lives by those societies.

The blessing thus bestowed on the British peasant and the frugal and industrious workmen of the country composing friendly societies, in having granted them a prolonged duration of life, must be regarded as a distinctive

* See Expectation of Life in the Peerage and Baronetage. By Dr. Guy.

feature of that class of persons, and is no doubt the result of their simple and uniform habits of life, and the more regular and natural physical exercises to which they are habituated.

The preceding observations form a correct representation of the average mortality of friendly societies in England and Wales, as compared with that of the general mortality of the kingdom, and will, we trust, enable the reader to arrive at the precise value of life in that portion of the population; so that he may ascertain with some degree of certainty the real nature and extent of the risk to which Life Offices are subject.

The value of annuities deserves consideration, and it is most important to inquire minutely into its bearings; for as annuity tables are the foundation on which all the subsequent monetary tables are built, any peculiarities must affect the whole structure of a concern. This will be observed on inspection of the tables for deferred annuities, as valued by Mr. Ansell and Mr. Neison. According to Mr. Neison's table, at the age of 30 the value of a deferred annuity of £1 per annum, to commence forty years hence, or at the age of 70, is 1.13398, or £1 2s. 8d.; and the value of the same sum, according to Mr. Ansell's table, is only .6764, or 13s. 6½d. This is a most remarkable distinction, and of vital importance to the community; for although the present results for the age of 30 show only an excess of value in simple or immediate annuities of less than 13 per cent. above those given by Mr. Ansell, yet in the deferred annuity at the same age there is an excess of 69 per cent. This marked difference is evidently the result of an erroneous mortality table, which proves so injurious to the interest of a society.

Mr. Neison gives a further illustration of this question produced by a result. Of 89,360 persons living, aged 30, 42,367 attained their 70th year of age; that is to say, out of 100 entering a friendly society at 30 years of age, and purchasing deferred annuities, 47 would be alive at 70 years of age to be placed on the annuity list; but Mr. Ansell's table would provide for only 33 persons becoming annuitants: or more correctly, out of every 1,000 members entering those societies at 30 years, there would be 147 annuitants unprovided for; that is to say, 45 per cent. more annuitants would have to make claims than would be calculated on by Mr. Ansell's data.*

According to the results of Mr. Neison's inquiry, as annuities are of greater value than they are estimated by other tables, it must follow as a consequence that the value of assurances or sums payable at death are of less value. According to Mr. Neison's table, at age 30 the value of £100 payable at death is £37 8s. 4d. and £38 13s. 6d., according to the value of life in Scotland; while, according to the Carlisle table of mortality, the

* The value of annuities payable more frequently than once a year will be increased. A person who receives an annuity by equal instalments half-yearly, will, for two reasons, be placed in more favourable circumstances than he who receives an annuity yearly. In the first place he receives the half of his annuity six months earlier, and so gains one half-year's interest on every moiety of his annuity; and further, he may live to receive a half-year's annuity more than the person who receives an annuity only once in, and at the end of, each year. An annuity payable half-yearly is therefore of greater present value than one which is payable yearly. For similar reasons an annuity payable quarterly is of greater value than that which is payable half-yearly; and as the number of times at which an annuity may be payable in a year increases, so will the present value of it increase.

value of the same sum would be £40 2s. 7d.; by Mr. Ansell's table it is £44 2s. 7d., and by the old Northampton table as much as £47 16s.

The annual premium at age 30 for an assurance of £100 at death is, according to the table of Mr. Neison, only £1 14s. 1d. and £1 16s. 9d. for Scotland; but the annual premium according to the Carlisle table is £1 1s. 9d.; by Mr. Ansell's table it is £2 7s. 1d., and by the Northampton table £2 13s. 4d. Complete evidence is here furnished in the analysis of the elementary data and facts on which the calculations are founded; and it is sufficient to show that most serious errors are the result of those remarkable distinctions in Mr. Ansell and Mr. Neison's tables, which seem to illustrate the true bearing and risks, and admit of comparison with other results on the same subject.

We have briefly entered into the critical and laborious investigation of those complete schemes in which annuities are involved, which may serve for the guidance of those who may be desirous of acquiring a knowledge of the principle and practice of Life Assurance.

The purposes for which a society may be established in connection with a Life Office may be included under very few heads; and we have a strong conviction that every object really and extensively useful to the working classes may be confined to the following principles:—

1st. For the assurance of money to be paid on the death of members to the wives, children, relations, or any other person whom in their lifetime they may choose to nominate to receive the sum accruing at their decease.

2nd. A provision for a deferred annuity of not less than £10, nor exceeding £100 per annum; said annuity to

commence at not less than 50 years of age, and to continue for the remainder of life.

3rd. A provision for a similar annuity to the above, the whole of the premiums to be returned without interest in the event of the member's death before attaining the specified age. A provision for an endowment not exceeding £200 for children, on attaining the respective ages of 14 or 21 years.

4th. A provision for similar endowment, the whole of the premiums to be returned without interest in the event of the decease of the party before attaining the age agreed upon.

5th. A provision for an immediate annuity not exceeding £50.

6th. A provision for the payment of a sum of money of not less than £10, nor exceeding £200, at the decease of a party A, provided another, B, be then living.

7th. A provision for the payment of a sum of money, of not less than £10 nor exceeding £200, on the decease of either of two lives that may be named.

8th. A provision for any other contingency whereof the occurrence is capable of calculation by way of average.

These principles may be applied and modified so as to include every object which forethought and providence can require to accomplish. The plan would conduce essentially to the future advantage of the working classes; and by a simple and practical arrangement there can be no doubt of its efficiency in effecting the objects contemplated. It is a strong proof of the prudential feelings of the labouring population of the kingdom, to find upwards of 2,000,000 entered in the ranks of mutual sup-

porting institutions, while not more than 120,000 members of the upper and middle classes have yet availed themselves of the benefit of Life Assurance. What a brilliant contrast do we, then, find on the part of the poorer classes of the country in the host of persons enrolled as members of friendly societies. We are called upon to take up a grand scheme to propound in clear and calm language the manifest advantages thence to arise from practically providing for Life Assurance and Deferred Annuities; from which, when established, the most beneficial results would arise, and perpetuate one of the most useful institutions ever developed for the working classes of any country.

When the system is perfectly understood, the members of friendly societies will forsake their institutions to participate in advantages founded upon sound principles.

It hence follows that an association under a scientific and amply-developed system would be calculated to remove *in toto* the cause of nearly all that poverty, distress, and misery which haunts our manufacturing towns, and fills our workhouses with the industrious population of the country, and would go far to destroy one of the most demoralising evils of the times, and probably one of the most fruitful sources of crime—namely, the wide-spread system of pauperism which now unhappily exists in the kingdom.

A COMPARISON BETWEEN THE SCHEME OF LIFE ASSURANCE AND THE SAVINGS' BANKS.

Every person acquainted with those valuable institutions the savings' banks, however he may admire and praise them, must nevertheless confess that they offer no advantage for the permanent investment of capital to the parties for whose use and benefit they are intended, and afford no security to those who invest their money of obtaining a provision for the period of age and infirmity. We do not allege this as any deficiency in savings' banks, for it does not appear that these most desirable objects enter into the system of banking, or any part of the ordinary business of a bank; we only state the fact, in order to establish our position—namely, that an institution is required to take up the matter where the bank leaves it. This might be done by Assurance Companies, while the savings' banks might still carry on their business in a manner totally different to that of Life Assurance, with which they would have no connection.

Every person who comes within the catagories which the savings' banks embrace, may deposit his savings in the bank on the most unexceptionable security, and receive a low but regular and eligible rate of interest; thus his savings may, if the party please, accumulate. But these deposits must not exceed £30 in any one year, and none can be made after the principal has arrived at £150, and no interest can be given on more than £200; consequently, the largest income which any one can possibly derive from a savings' bank will never in any case exceed the sum of

£6 per annum, or 2s. 4d. per week. This no one will venture to call "A provision for the decline of life."

The savings' bank, therefore, is only a secure place of deposit, not that which can be justly termed an investment, since the sum of money which many depositors hold in that institution, and which brings them in annually but a trifling income, is amply sufficient to secure a provision for themselves during life, or for their families at death.

The utility and advantages of savings' banks are unquestionably very great, and are exhibited in nothing so much as the fact that the amount of the deposits has enabled Government indirectly to borrow from the industrious classes a capital exceeding £20,000,000 sterling. This £20,000,000 is, undoubtedly, a vast sum, but whilst it remains in the bank, it will only return to the depositors an income of £600,000 per annum. Were a portion of it—say only one twentieth part—annually withdrawn to be invested in deferred annuities, the reduction of interest would lower the £600,000 to £570,000 a year: and it would be rapidly replaced by accumulated interest, increased by the aid of fresh deposits, for the savings' banks' sum total is actually increasing in a superior ratio. If a million a year was annually withdrawn for investment in Life Assurance, and even were we to suppose three-fifths of the investors to survive and receive their annuities, £130,000 would be paid each year for the interest of £30,000, when the machinery once arrived at a working point, with no perceptible deficiency in the sum of the money held by the savings' banks, but probably a vast increase; a deep stream of currency would be flowing back into the class of de-

positors ; in fact, the human mind cannot grasp the magnitude of the results of this plan, or arrive at the full effect of which it is capable.

The savings' bank is only what its name denotes, "A place for the deposit of savings." If a man be ever so prudent with regard to money transactions, and attain the extremity of life, his savings and the interest will have produced him a very inadequate sum ; but if resolution to invest fail him, or habits of expense induce him to withdraw his funds, or if he die in early life, his scanty savings will form a very inefficient fund for the provision of his family. But suppose the depositor relinquished a portion of the interest which his savings may bring him in the event of his attaining old age, in consideration of being provided with a larger sum at death instead of an interest of a few shillings yearly, there would be a greater inducement given to the depositor to invest his money at a premium for an assurance on his life.

Let us take an example of a person at the age of 30 years, and suppose that he has £50 deposited in the savings' bank, for which he would receive as interest the sum of £1 10s. per annum, and suppose this man to live and die exactly in accordance with the scale of mortality,* and that money yield during the continuance of his life a uniform rate of interest of 3 per cent. per annum. These assumptions being established, the payment of the sum of £50 by an individual to any society, would secure to him the sum of £500 by a policy of assurance on his life.

It must be apparent that were he to die in the year fol-

* The age of 96 is assumed by the Northampton table to be the extremity of life.

lowing his family would gain considerably by his death, as his contribution of £50, if laid out at interest, would only have produced him an increase of £1 10s, in the twelve months; whereas, on the other hand, if the same individual had attained the age of 96 years, his original contribution of £50 would have amounted by the accumulation of interest during the 66 remaining years of his life to upwards of £350, and in such case his family would be losers by his length of life.

The principle is exactly similar when the payment, instead of being made in a single sum at the commencement of the assurance is made annually during the continuance of the assurer's life; but with this peculiarity, that if the assured live to the extremity of old age, he will have contributed a larger sum to the funds of the institution by the payment of his annual premium than he would have done had he paid his whole contribution in one payment; and on the other hand, if the assurer die soon after entering the society, he will have paid much less than he would have paid had he become a member by the payment of a single sum.

Another species of Life Assurance is that of the Deferred Annuities, which we may describe by stating that if a person is possessed of a sum of money, and avail himself of this mode of investment, an Assurance Office will, according to the probable termination of his life, grant him a certain annuity for the period of its continuance.

Suppose a person at 20 to be possessed of £25, that sum would not, in fact, procure him a life annuity; but suppose the rate of interest be from $3\frac{1}{2}$ to 4 per cent., then, if he consent to wait twenty years, it will have amounted to £50, and in forty years to about £100 in

value. The probable duration of life is very different at 40 from that which it is at 20; at 60 the probability of its continuance is considerably diminished.

Whilst £25, therefore, at 20 would purchase no annuity of any value, £50 at 40 would do so; and £100 at 60 would buy for him £9 10s. 9d. per annum. Now, if a large number of such persons pay their money at 20 into an office, until any definite period, each person who survives may at the termination of such period begin to receive a "deferred annuity" for the term of his life, as Assurance Offices can invest large sums to so much more advantage than individuals can invest their small ones; therefore, in a course of years, can pay the expenses of their establishments, obtain good profits, and give larger interest to individuals than the latter could obtain by their own investments without such a system.

The largest sum of money which any depositor can have in the savings' bank is £200. The interest allowed for this is only £6 per annum, which is scarcely more than 2s. 3d. a week. This is manifestly no justly-remunerative investment affording a provision for the decline of life.

But if a man aged 40, with £100 in the savings' bank, invest, the Assurance Office will give him an immediate annuity of £6 1s. 4d. per annum; if he purchase a deferred annuity, payable at the age of 55, he will receive £13 17s. 4d. a year for life; after that period, at the age of 60, he might enjoy for life about £21 13s. 4d.; but at 65, his life annuity will be nearly £40 per annum.

There is this comparison to be made—that is, if the party is 40 years of age, and has £100 in the savings' bank, and proposes to provide for himself a life annuity, to begin at 55, 60, or 65, then the value of the latter

ought justly to be compared with that which his £100, with interest at the savings' bank ratio, accumulated at fifteen, twenty, or twenty-five years respectively, would purchase at the end of those several periods. By the first, if the party fulfil his condition, and never interfere with the principal or interest, there would be little variation in the result; but the advantage of the latter is not based upon this hypothesis, as the deferred annuity system places the party beyond the reach of temptation. If he is 41, and his annuity is to commence at 60 years old, his £100 will by that time have accumulated so as to purchase a life annuity, but of less value than on the deferred system by one-eighth part. If we suppose the £100 to have accumulated in like manner from 40 to 65, the annuity it would purchase would be less, in the proportion of two to three, than that which the deferred system would give.

From this it will appear that the arguments in favour of the assurance principle, rather than that of keeping the money uninvested, are exceedingly forcible, and entitled to most serious consideration.

The practical application of the principle of Life Assurance certainly affords the means of better investment for any sum, from £50 to £500, of which any person may be possessed at an early or middle period of life. Indeed, a more advantageous investment cannot be offered to those whose income may fail with their bodily or mental power than that afforded by Life Assurance.

For example:—Suppose a young man at 21 begins to save £20 a year, he may secure to himself at 60 a life annuity of £200 a year on a sum of £2,000.

A medical man who commences to save £50 a year, would secure £120 a year as a retiring pension, and

another of about £200 a year at 60. This is certainly, looking to one's own personal security, the very best investment for the decline of life.

Take a person at the age of 30, possessed of the sum of £100. In the savings' bank it will give him £3 a year, which is no profitable investment. If he put it out at interest at greater hazard, the produce may be to a trifling extent increased. If sunk in a life annuity, it will give no more than £5 12s. 8d. None of these plans, therefore, secures a provision for the decline of life. If, however, the £100 be allowed to accumulate in the savings' bank, then at the age of 55 it will amount, at 3 per cent., to £210, which will purchase a life annuity of £17 13s. But if the party lay out his £100 at 30, on practical terms, in a deferred annuity, to commence at 55, he will have £22 17s., instead of £17 13s., the difference being £5 4s. per annum. We may invert this operation; for, by allowing the £100 to accumulate at the age of 55, you can then buy only £17 13s., instead of £22 17s. a year; so, by entering into this contract, you may receive at that age £260 in lieu of that annuity, which sum is proportionably better than £210, the difference being £50.

From these facts it will appear that by purchasing a deferred annuity in early life, the party is making a secure provision for his declining years.

It may be objected that he is speculating on his life, but this is inseparable from every kind of Life Assurance. Since, however, should his prospect of living, at the period when the annuity becomes due, appear hazardous, he might have the option of taking either a sum paid down, or a policy for a larger sum at his death; in which case he would be doing better for his heirs, as well as for himself,

than if he had allowed the money to accumulate in the savings' bank. We are justified in the conclusion that even as a matter of calculation the advantage on the side of the deferred system, as a matter of economy, in securing a permanent provision for the certain advent of age and its infirmities, is clear and manifest; as a question of social and moral prudence we are certain the practical result will be found to be in favour of this system of Life Assurance.

CHAPTER VI.

REVIEW OF LIFE ASSURANCE.

EXPLANATION OF THE NATURE, ADVANTAGES, AND THE VARIOUS PURPOSES TO WHICH IT MAY BE APPLIED.

WE propose in this chapter to examine the more common objections to the great benefits, present and prospective, of Life Assurance, as well as the adaptation of that system to the circumstances of those large portions of the community who have hitherto considered its benefits beyond their reach, and also to induce its more general adoption by all classes. We shall advance nothing which is not the result of many carefully-recorded observations on the practical working of the system, and can with confidence affirm that Life Assurance is the most simple, certain, and inexpensive method ever devised for increasing present enjoyment and for preventing future misery, so far as each of those objects is attainable, by making certain provision for survivors, who must otherwise be left destitute.

Life Assurance has passed through crises the most difficult without ceasing to make the most rapid progress, and has by unusual good fortune obtained the approbation of all economists and all moralists whose influence upon the public has been perceived by every observer, men of science also have deemed this subject deserving of their most persevering studies; each day reveals new applications of its powers; and it has been demonstrated that Life Assurance has promoted, and is calculated to promote still further the interests of all classes of society, without in-

juring any ; that it satisfies the generous aspirations of the heart, and at the same time allays the anxieties of worldly foresight. In fact, the gigantic developments which it has already undergone appear to be only initiatory to others which the future will unfold.

The purposes contemplated by those who originally established the system of Life Assurance was to guarantee a certain capital payable at the death of an individual, by means of the annual payment of a premium, demanded only during his life. To give him the free disposal of this capital by a simple indorsement—to share with him the benefits of the company with which he contracts, in the way he might prefer, either to increase progressively the guarantee capital, or to diminish gradually the amount of the premium ; or to place in his hands a title of a value always increasing and realisable to his own profits, are what are accomplished by assurance upon life.

The first proposal for a contract of this kind was dated as far back as 1706. Since that period the labours of Price, Becher, Babbage, Milne, Morgan, and other learned men have perfected the system, and have caused the principle to be better understood. Consequently companies have multiplied, but not to an extent adequate to the wants which manifest themselves amongst a rapidly-increasing population.

From the immense sums which have been accumulated as profit in Life Assurance Companies, notwithstanding the surplus disbursed to the representatives of deceased assurers, we see a society* which possessed in 1846 a fund of ten millions sterling. Such is the result of one society's ope-

* Equitable.

rations only ; and there are nearly a hundred in London, the total of the sum assured by whom is computed at one hundred and twenty millions ; while the sums accumulated from premiums amounted at least to forty millions sterling.* That this success is not the result of temporary enthusiasm, the experience of more than a century demonstrates, and experience in such matters furnishes materials for the most conclusive reasoning. It is considered by many persons that the system of Life Assurance is fully known and understood, and that little remains to be said upon the matter ; but experience proves that, notwithstanding transactions involving such extraordinary obligations as those connected with Life Assurance have taken place, its principles are but very imperfectly understood, and its benefits only very partially diffused. Of the twenty millions of inhabitants of Great Britain the actual number of persons insuring their lives is 120,000 ; but as many persons effect several policies upon their lives, it may probably amount to 150,000, being about one in a hundred of the population, or one in ten of the heads of families of those classes of society to whom Life Assurance is applicable. Thus not five per cent. of the whole population have had the forethought to perform the most important duty that devolves upon all men—namely, assuring their lives. Scarcely two per cent. of that portion of the population to whom Life Assurance is applicable have made provision for their families.

This is remarkable, since the death of every 1,000 persons in the middle and lower ranks of life, who have not assured their lives, leaves at least 4,000 women and children in poverty, if not in absolute penury, who might otherwise have been left in comparative affluence.

* See Introduction, pages 1 and 2.

No doubt the principle of Life Assurance has, during the last ten years, excited increased attention among all classes in this country, and that this mode of securing a provision for a family, or for those whose position in society, or even subsistence, is dependent upon the exertions of a single individual, is to some extent now considered a paramount duty, and one which ought, on no pretence whatever, to be neglected; yet, although the necessity is theoretically admitted, the advantages of Life Assurance are in point of fact secured only to a very limited number by professional men and men of business generally. We all admit the value of the institution, but are reluctant or careless in availing ourselves of its positive benefits. In the present state of society there can be no excuse for the apathy and indifference to the subject displayed by the great majority of the people of this country in any other way than by attributing such to ignorance of the purposes to which it may be applied. The subject is not difficult to understand, for nothing can be more simple to those who have given it the most cursory consideration; and it certainly appears extraordinary that, notwithstanding all the efforts which have already been made to disseminate a knowledge of the first principles of Life Assurance, so little progress has been made. A knowledge of the subject has not been limited to Life Assurance Associations; for some of our ablest writers on economic questions have treated the subject extensively, and we may mention the articles in the "Encyclopædia Britannica;" in the "Quarterly Review," No. 128; and also the article on the "Principles of Insurance," in Mr. McCulloch's admirable "Commercial Dictionary;" and many of the most popular periodicals have presented the subject to the public in the most attractive and practical form, to show the advantages

which such institutions offer as a provision for families at death. It might have been expected that these efforts would have produced more favourable results, but even as yet they appear not to have made much impression upon the minds of a vast portion of those for whose benefit many of those institutions were established.

The principal objections urged against Life Assurance are, first that a person can realise a larger sum by laying by his surplus income than by investing his capital in a Life Assurance; secondly, that it is a gambling transaction, and speculation upon life; thirdly, that a party is young, strong, and healthy, and may live for years to make a provision for his family; the fourth objection is, that the income is too limited to afford the deduction required to insure a future provision for a family.

First.—The great distinction between an assurance as a mode of investment, and that of laying by money to improve at interest is, that by an assurance a person is guaranteed a sum payable at his death, were that to take place the very next moment after he had paid his annual premium; whereas, by the ordinary mode of investment, it would take a considerable number of years before the sum put by would be equivalent to the sum assured; and the latter plan, even in the cases of the longest lives, is open to the objection that the individual has always a fund to which he has ready access, and to which he resorts at periods of necessity, instead of economising his expenditure, which he would be obliged to do, had he invested his capital in an assurance upon his life.

The contract of an assurance completed, the property of the assured is positively at once so much increased. The condition being an annual payment, not a payment for an

uncertain advantage, the advantage is clear and definite, —the more especially if the uncertainty of a person's accumulating from small savings be taken into account, and how prone most persons are to allow their expenditure to exceed their income. Previously to these institutions being established, the man who could save only a very small portion of a very limited income might despair of accumulating sufficient to provide for his family, and the difficulty of investing small sums yearly, and of obtaining accumulated interest, were almost preventives, deterring even a man anxious for the future welfare of his family from endeavouring to acquire by small savings anything which he could reasonably hope would, though fostered through length of years, swell into a patrimony for his children. But now the more than probability, the certainty, is his. The system of Life Assurance incites all to the moral obligation of exercising foresight and prudence; since, through its means, these virtues may be practised. If a man's income be sufficient to allow of his setting apart something considerable for an accumulating fund, it is still no slight advantage, if we consider the constitution of human nature, that he can put it out of his power to encroach on his accumulations. By laying out an annual sum in assuring his life, he cannot, without difficulty and considerable loss, apply to his present uses his past savings; while there is little fear that he will be so improvident as to forfeit his testamentary claim to them by neglecting to make his periodic payments.

Thus Life Assurance operates beneficially, and may be regarded in the light of a bank for the amount of premiums paid not only to the individual but to the community.

A great authority has remarked:—"An insurance upon

any life, effected in any office, is not only a private but a public benefit."*

Second.—Many persons unacquainted with the subject regard the practice of Life Assurance as a gambling transaction and speculation upon life; nor are such notions confined to the ignorant and illiterate, for even our Continental neighbours, the French, are not exempt from the taint of these prejudices against Life Assurance, which has always been discountenanced by them, but a slight consideration of the subject must convince every unprejudiced mind of the fallacy of these objections.

Many persons who are in trade object to Life Assurance on the ground that the money required for such an object can be much more advantageously employed in their business. If the trade be profitable, this is undeniably true. Are they sure, however, of living sufficiently long, and of enjoying such a course of uninterrupted prosperity, as will enable them to save for their family as effectively as by an assurance on life?

It might, perhaps, be said, that the business is profitable, yielding a fair return for the capital employed, and that stock, fixtures, and furniture are at all times sufficient to satisfy every creditor, and leave a handsome surplus as a provision for their families. This may be quite true, but, like health and life, it applies only to the present moment. What may happen on the morrow is unknown. There is no certainty, however encouraging the prospect, about the future. Trade may decline, competition may unexpectedly arise, health may fail, dishonest servants may wrong, or life may be prematurely terminated. In either of the first

* De Morgan on Life Assurance.

four cases the business may still go on ; but that business, which is now a thriving one, may become unprofitable. In the latter case, the master's skilful hand and vigilant eye being removed, who would undertake to say that there would be sufficient to satisfy every claim and provide for his widow and orphans?

However impossible it may be to reason with these persons upon their own principles, it is proper to remark that precisely the same objection urged by them against Life Assurance will apply with equal and, in some cases, greater force against all the ordinary methods of employing capital with the expectation of profit. Those who appear to be so very sensitive about what they denominate Life Assurance, do not object to purchase houses and lands and other kinds of property, when offered on advantageous terms; nor are such of them as are in trade less anxious about profit than others in the same line of business. We have known persons attempt to justify their inconsistency in making no future provision for widows and orphans, because they would not question the designs of the Creator, and who, while neglecting this ordinary method of accumulation, are engaged in desperate speculative adventures, which no wise or prudent man could for a moment have entertained, and which must terminate in ruin to a vast number of those who foolishly engage in them.

Life Assurance is not founded upon purely philanthropic principles, nor are these professed—such philanthropy is not believed in the nineteenth century. Men refuse to credit the probability of a handful of men establishing a company calculated to diffuse immense good solely with the desire to benefit the community without the remotest intention of also benefiting themselves. Such is not the

case. A railway is started for two objects: the first is, to obtain profit for those who first designed the plan; and this is perfectly legitimate, for had not a number of mercantile men advanced with capital at their disposal, the second object, which is to benefit the public, would never have been obtained. In like manner the Life Assurance companies are established by men of capital, both with the view of extending advantages to the empire at large, and of deriving an interest from the money they invest. So far, therefore, from considering every kind of Life Assurance as an interference with the dispensations of Providence, we ought to look upon it as one of those compensating and certain means by which danger is diminished and loss repaired, and, in the words of a distinguished author, "As well, and apparently with more justice, might we declaim against the presumption of our medical men attempting to preserve life in cases of sickness or accident."

Is life certain? Is it not certain that we must all die? Is it not, then, our duty to avail ourselves of medical skill to preserve our lives when they are in danger; and is it not equally necessary to contribute in proportion to our means for the benefit of the widows and orphans of those who die prematurely, and thus to prevent the humiliation of their appealing to public or private charity?

Third. Many persons decline to assure their lives on the ground that they are young, strong, and healthy, and may live to amass a sufficiency for the maintenance of their families. When any man can guarantee to himself a positive period of existence, and the power of resisting the temptations which may and do occur in the hour of

necessity, then, and then only, will this reason for non-assurance be good. It is always difficult to bring parties to a proper consideration of an abstract duty, however important that duty may be; but in urging this duty the uncertainty of life necessarily becomes the greatest and most solemn of all the arguments which can be used. This is what no one disputes. We do not depend upon chance, in the ordinary acceptation of the term, but we depend upon experience—upon a law of nature, which is indisputable; that is, what the bills of mortality show, that out of five thousand persons, in the prime of manhood, six hundred will die before ten years; and before another ten years has passed away seven hundred more will have ceased to live; and for a third term of the same duration, eight hundred and fifty will have gone to their final resting-place; add them together, and in thirty years two thousand one hundred and fifty out of five thousand will be dead.

These facts show the utter folly of a man relying on youth or strength to shield him from the shafts of death; for he must be presumptuous indeed who will say that he is not one of those who will meet with an early death. Such may be the fate of the very individual who reads these pages, and the chances are as a thousand to one that he has not insured his life—that he has made no certain provision for those who now cling around him, and who look up to him not only for present support, but for future subsistence. Such may be the case, and such, indeed, it must be generally. Delusive speculations such as these must, indeed, be common, since out of our vast population, out of the many millions who live and exist upon their mere “daily bread,” we have not more

than about one hundred and fifty thousand policies taken out throughout the whole empire.

The period of health, it must be recollected, is the only time when life can be insured at a moderate rate, as the tables are calculated for unexceptionable lives; for should disease make its appearance an additional premium is always charged, and the life may probably be rendered altogether uninsurable. An accident may occur—from which we are none of us exempt—in which case, how has he provided for his family? How can he be certain that he may live even another year to add to his small savings, or that health will be conferred on him to enable him to continue his exertions? A writer on Life Assurance judiciously remarks:—"A whitened tongue or a quickened pulse find no passport of admission to a Life Office; and who shall say he is secure for a single hour from some derangement of system that shall bring these symptoms upon him? What anxiety must he who is waiting for the proper moment to insure sustain at every incipient approach of illness: the spasm he feels may be the herald of cholera, the sudden ache in the temple may be the courier of death."

Fourth. It is urged by an individual that his income is too limited to afford the deduction required to insure a future provision for his family. But this is a fallacy. Many a person may say that the present demands made upon him will not allow of a portion of his income being applied to meet future contingencies: this may, unfortunately, be the case with many; but how many thousands are there, prosperous but unreflecting people, whose incomes are solely dependent upon their lives—who subscribe their guineas to clubs and to public charities, while at the same time they neglect to provide a com-

petency for their families in the event of their premature death; and if we had not official documents to corroborate the statement, it would not be credited that fifty millions sterling per annum are paid for drinking and smoking by persons, many of whom profess that they cannot afford to put by a portion of their income to provide against the casualties of sickness, old age, and premature death.

This same man who denies his ability to provide the means by which his family may be secured from want in the event of his death by a timely assurance, is careful to protect his own comforts. He hastens to insure his house and furniture to secure to himself their value in case of an accident by fire, lest during his own life he may experience an inconvenience by their destruction. He then reflects upon his prudence and forethought, which had enabled him thus to retrieve his loss, while his own existence is unassured, and he does not hesitate to leave his widow and orphans to the chances of poverty, because he will not sacrifice one iota of his own personal comforts to insure future independence to those who may survive him. This "tendency to live for the present" is a purely selfish tendency. The "reluctance of many more to anticipate the future" is a morbid feeling. Delay here is danger. "When our design terminates only in our own satisfaction the mistake is of no great importance; but when others are interested in an undertaking nothing is more unworthy either of wisdom or benevolence than to delay it from time to time, or to forget how soon an idle purpose to do an action sinks into a mournful wish that it had once been done."*

* Dr. Johnson.

We hope that these observations will have the effect of removing the objections to which Life Assurance is subject, and that the time is not far distant when it will be unnecessary to refute such fallacies, or to promulgate in detail the manifest advantages of Life Assurance.

Life Assurance, though based upon self-interest, yet is the most enlightened form which the self-interest has ever assumed.

The general principle is, that no company agrees to return to those who assure the amount which they contribute ; but every company guarantees the value which it promises, be it more or less than the value received. "It is an agreement by which those who have more than average success resign the overplus in favour of those who have less."*

The certainty is the only thing contracted for. Trade and speculation might have realised greater results—trade and speculation might have realised ruin. The man who is dependent upon his daily exertions for the support of his own family, is dependent for its continuance upon his continued existence. Existence no society can guarantee ; Life Assurance guarantees its average objects. Every contingent chance is calculated—every requirement provided for ; all classes of the community are admitted to share in its advantages and results. All ages are alike invited to participate in its benefits. To the sexagenarian, to youth, to earliest manhood, to the colonist, to the traveller, to the peer, and to the peasant, it alike proffers its manifold advantages.

The most awful period in a man's history—the moment

* De Morgan on Life Assurance.

when his spirit wings its flight to a distant world—is usually the time when the greatest revolution takes place in the circumstances and destinies of his surviving relatives.

The sorrowing widow and mourning children need bear no heavier misfortune than that which has fallen upon them in the loss of a friend, an adviser, and a protector. And yet how often is it the case, even with the thoughtful and prudent, that to the loss of a husband is added the distress arising from pecuniary embarrassment. Willing and unwearying hands supported the wife; that source is in a moment removed, and no other is substituted for the widow. Friends pity, but do not relieve; advise, but give not wherewith to put their excellent plans into execution. The landlord cannot let people remain in his house who do not pay rent. Tradesmen must receive the money due to them, or they will seize the furniture; and thus in a few weeks, from circumstances of comparative ease and comfort, a family is often reduced to utter destitution. Cannot the principle of mutual support be made available here, so that these evils may be avoided, or at least be greatly mitigated? It can, and to a considerable extent.

The system of Life Assurance is one of voluntary mutual support in one of its most palpable forms.

It is that of combination, in which for certain specified ends an annual payment is made. Considered simply as a pecuniary investment, this may turn out favourably or unfavourably. Should a man's life be prolonged, it is possible he may pay more than his representatives will receive after his death. Should he die soon, the pecuniary gain to his representatives would be large.

We derive, from the moment the assurance is effected,

the satisfaction that a provision has been made for those who may be prematurely deprived of protection ; and we have also the satisfaction of reflecting, that if there is a loss, the loss turns to the benefit of others, whose families have been bereaved of their heads and guardians.

This relief from anxiety afforded by Life Insurance very frequently contributes to prolong the life of the insurer, at the same time that it materially augments the comfort and well being of those dependent upon him. It has also an obvious tendency to strengthen habits of accumulation. An individual who has assured a sum on his life, would forfeit all the advantages of the insurance were he not to continue regularly to make his annual payments ; it is not, therefore, optional with him to save a sum from his ordinary expenditure adequate to insure this purpose, he is compelled under a heavy penalty to do so ; and having thus been led to acquire a habit of saving to a certain extent, it is most probable that the habit will obtain additional strength, and that he will either reserve an additional sum, or privately accumulate.

It is difficult to exaggerate the evils arising from the improvident disregard of futurity, or adequately to depict the desolation entailed upon the surviving by the sudden removal of their natural protector.

Amid the various vicissitudes of life, in the struggles and anxieties of a parent to provide for those endeared to him by every tie of consanguinity and affection, who can describe the bitterness of his feelings when he reflects on the realities of utter destitution ?

It is hardly possible to over-estimate the extent of the calamity, when the head of a family is stricken down, and the members are left in helplessness and poverty. It is

not only in such a case that the affections are crushed and wounded by the loss of a beloved husband or parent, the miseries of destitution are forthwith felt also ; there is the dependence on the too often precarious and stinted assistance of others—there is an end of the independence and comfort of the whole household.

Take such a case in the higher ranks, where a certain style and a superior manner of living had been maintained, where certain luxuries had become almost necessary, where a higher education was being imparted to the children, and where the well-directed efforts of the parent who has been taken away provided the means of elegance and comfort for all. In a moment, and by an event in itself, and independent of circumstances the most afflicting, the source of all this happiness is dried up, and the helpless mourners are made at the same time dependents—perhaps almost or altogether beggars. In the breaking up of a household, in the divisions of the members, in the parting with every superfluous article of furniture, however valued—for the associations connected with it in the feeble attempts to keep up something like former respectability, and the gradual descent to the lowest stage of poverty, there is perhaps as much of misery experienced, as under more substantial privations. The heart in such circumstances—the heart of the widow or the orphan, knoweth its own bitterness, and none else ; surely it becomes him to whom the affections of that heart have been most devoted, to anticipate the possibility of such a season of trial and privation, and as far as possible to provide the means of alleviating it, and soothing its sorrows ; and if he cannot ward off the stroke of death, yet by wise precaution, to ward off at least the evils of destitution and the misery of dependence.

Take an instance, a case of very common occurrence. Suppose a clergyman, happy in his domestic circle, educating his children liberally, and with his £400 or £500 a year, distributing consolation to his parishioners, possessing only a life interest in his income; no sooner is the thread snapped than beggary stares his family in the face, the widow and children are at once turned out upon the wide world, or doomed perhaps to receive a wretched pittance from some relation. We know not a fiercer or more formidable trial than to be reduced to this state. And is this the state to which any man could desire that those he loves and cherishes should be reduced? We look to the moral principle, to the lesson of natural affection, that the duty of every man is to use every competent means to prevent such consummation.

The reader must not mistake this for mis-timed sentiment, for never was language employed in closer relation to the practical concerns of every individual—to the demands of ordinary prudence—to the requirements of social responsibility and domestic duty,—in fact, to the realities of life. For what can be more sternly real than suffering and destitution?

The most common and fatal error committed by those who depend solely on their own exertions is in attempting to make a suitable provision for survivors by the slow and deceptive process of accumulating savings through a long course of years, a process which is at any moment liable to be interrupted by sickness, to say nothing of the innumerable accidents and reverses incidental to humanity, and which are daily occurrences in the occupations of active life. There can be no security against the weakness and infirmity of human nature, for the man who is sober and

industrious to-day may be corrupted by bad company before a single revolution of the earth about the sun is over. The man who is comparatively rich may break through the regular habits which have made him so, and he will find, like one rolling a wheel up hill, that to pause and withdraw his hand is to allow it to roll back, and that the labour of a long period is lost in a very short one. The truth is, that when men place money within their own power, they are more frequently injured by it than benefited; they are liable to be tempted into excess, and when they have withdrawn or spent their capital, are worse men in a physical, as well as in a moral point of view than they were before.

A man may feel satisfied that in a few years he will have saved sufficient to leave a competence for his family, but he may at any moment of time be snatched from them ere the proposed sum is amassed. It is plain that the source of saving, however strict the economy that may be practised, cannot be relied on; saving, to be effectual, must be a work of time; and our very supposition is, that time is denied—that adequate time cannot be counted on. Here, then, comes into operation the principle of Life Assurance; what cannot be effected by the individual can be effected by the combination of individuals.

Life Assurance is most important; if a man has no other means of making a provision for his family, he is bound by all considerations of prudence to set apart a portion of his income for this purpose. The intense competition which marks every description of business, leading to long-continued mental application, has had a fearful effect on the health of many persons, and sudden diseases induced from these causes are of frequent occurrence.

The necessity of applying increasing capital, the changes in various businesses from the introduction of new inventions, the fluctuation in the value of property, are all circumstances which render it most difficult to make a permanent provision for a family from the profits of trade. At any time, too, this means of realising a property is uncertain and liable to interruptions, but by the principle of Life Assurance, a fixed sum may at once be secured by a small annual payment, which might in most cases be paid without the slightest difficulty, and in others by the abandonment of unnecessary luxuries. There is nothing so humiliating, or so much to be deplored, as the spectacle of a family, who have been accustomed to the enjoyment of every comfort, at once reduced to a state of abject dependence; yet cases of this description are of constant occurrence, which might have been prevented or mitigated by the exercise of what ought to be deemed a common act of prudence, a duty that no husband or father can neglect without risking consequences serious indeed to his wife and children, should he be overtaken by death before he has provided means to assist his family, and thereby averted from them the distress and humiliation of seeking parochial aid.

No man is justly entitled to allege as a reason for not making a provision for his family at his death by means of Life Assurance that he cannot afford to insure his life.

"It may be felt by many that, admitting this duty in full, their income is nevertheless insufficient to enable them to spare even the small sum necessary as an annual premium for Life Assurance; the necessities of the present are in their case so great that they do not see how they can afford it. We believe there can be no obstacle

which is apt to appear more real than this; where an income is at all limited, and yet it is easy to show that no obstacle could be more ideal. It will readily be acknowledged by everybody who has an income at all, that there must be some who have smaller incomes; say for instance that any man has £400 per annum, he cannot doubt that there are some who have only £350; now if these persons live on £350 why may not he do so too, sparing the odd £50 as a deposit for Life Assurance? In like manner, he who has £200 may live as men do who have £175, and devote the remainder, £25, to have a sum assured on his life, and so on.

“ It may require an effort to accomplish this, but is not the object worthy of an effort?—and can any man be held as honest, or any way good, who will not make such an effort rather than be always liable to the risk of leaving in beggary the beings whom he most cherished on earth, and for whose support he alone is responsible?”* The man who has brought a family into existence, entirely dependent on him for support, and future welfare in the world, is bound, as a man, to prevent, if possible, the contingency of their ever becoming a burthen upon the charity of the country, or being reduced from a state of comparative plenty, by his own selfishness, to that of poverty and want; and as to the accumulations in a bank, what would they amount to in 20 years compared with the sum he would secure by the same annual payment for insurance? £20 a year invested in a bank would only amount to £400 in 20 years; whereas the sum of £20 paid yearly to an Assurance Company for an assurance on his own life at

* Chambers' "Information for the People."

the age of 25, would immediately secure the reversion of £1,000 to his family ; so also the saving of £20 per annum, regularly made, will give at 60 rather more than £50 a year for life, which is dependent upon no more improbable contingency than that a man should live to the age of 85—one very possible—to give him an annuity of that amount for 20 or even 30 years. If at the age of 25 he could save from his income £20 per annum, it would be nearly 30 years before his savings, laid out at $3\frac{1}{2}$ per cent interest, would amount to £1,000 ; but if he invested this annual saving in assuring his life, the investment would be already his to leave in reversion, and the 30 years of the best part of his life would not be wasted in anxiety and care. The anticipation of future evil no longer would rob him of present enjoyment; for by an annual fixed payment he would be secure of leaving a fixed sum at his death.

Let it be borne in mind that no man is too poor to insure his life, for persons of the most limited means can surely lay by the sum of £2 2s. 7d., or about one shilling a week, commencing at the age of 25, to provide £100 at death. This sum may be obtained by the trifling sacrifice of a small temporary gratification, easy to forego, for a permanent relief hereafter, which would at once allay his fears of the future poverty of his family, and realise for himself in the hour of his death, peace of mind, by the knowledge that, by that trifling subscription, he has secured to his offspring the advantage of a provision. What is the sum of £21 a year, deducted even from a moderate income?—not more, in point of fact, than 8s. per week. Many a tradesman of the middle ranks, or even an artisan, could well spare so small a sum from his weekly earnings. But without the intervention of the scheme of Life Assu-

rance, many years must elapse before he would be enabled, even by saving annually that sum, to amass so desirable a patrimony for his family as £1,000.

There is no way in which the subject can be brought before those who have not yet considered it in its true light with a fairer or better probability of its being productive of good effect, than by pointing out actual cases which have occurred.

Immediate benefits are, in some instances, derived by the families of those who assure, and a considerable number of cases have occurred in which only one premium has been paid. We find, for instance, £500 realised after the policy had run 262 days; £800 after 330 days; £600 after 206 days; £1,000 after 4 months, and so forth.

Some years ago there occurred one particular case of a very striking nature. An industrious man, engaged in flax spinning, and who sunk most of what he had in a concern of that nature, insured £500 in the month of February, for which the usual comparatively small sum was paid by way of premium. In the ensuing April, not satisfied with the first sum, he insured £500 more. Next month, after the second policy had run only 22 days, he died in consequence of a severe injury from his own machinery. Thus his family obtained the welcome sum of £1,000 to assist them on in the world, a sum which they could not have had if their parent's death had taken place three months sooner.

"An eminent tradesman in London effected an assurance for £2,000, and dying within the first year, from inflammation, arising from a cold, his widow and family were thus put in possession of £2,000.

"A young married man, in the medical profession, opened

a chemist's shop in the suburbs of London, and was induced by his wife's friends to assure his life for £1,000; shortly after this the cholera made its appearance in the Metropolis, and the party in question fell a victim to that disease. The assets of the deceased were little more than sufficient to pay his creditors, and had it not been for the insurance on his life, his widow and family would have been left destitute; as it was, however, they received the £1,000.

"A legal gentleman took out a policy of assurance for £1,500 on his own life, and having caught a severe cold, ruptured a blood-vessel during a paroxysm of coughing. This occurred after two annual payments only had been made, and his family, of course, received the £1,500.

"A clergyman, aged 30, possessed of an income of £500 per annum, and married, without a family, desirous of securing his wife a sum sufficient for her support, in the event of his being cut off before he was enabled to save the required amount of money, assured his life for £2,000. The annual premium payable to the office was £45—not a tenth of his income—and he having unexpectedly died after two payments had been made, his widow received £2,000, which enabled her to maintain a state of comfortable independence during life.

"A medical gentleman in a country town whose emoluments, from an extensive practice, averaged £300 per annum, reflecting upon the precarious tenure of health in the sphere of his duties, which necessarily exposed him to the constant vicissitudes of the weather, besides bringing him frequently into contact with parties afflicted with infectious diseases, took out a policy on his own life for £1,000. Having been assured for four years, he died

from a malignant fever caught in a professional visit, and his widow thus obtained the sum of £1,000.

“A still more striking instance of the uncertainty of life occurred in the case of a commercial gentleman, who, for the benefit of his wife, to whom he had been lately married, made a proposal to an Assurance Company for a considerable sum, and his health being good the proposal was accepted, and the premium paid. He died of apoplexy during the first year, and the large sum insured thus fell to his widow.”*

These facts may be considered sufficient to place the utility of Life Assurance beyond all question; and they are undoubtedly of constant occurrence.

They show most forcibly the danger of entire neglect, or of delaying to make use of what may, in a vast number of cases, prove to be the only means of securing a provision for those in whose well being we are interested.

These illustrations exemplify the uncertainty of life; and as we have data by which the premiums for assurance can be charged in proportion to the extent of that uncertainty, no man has the slightest justification for neglecting so important a duty, and so valuable a means of making a provision for his family as is presented by Life Assurance.

It will be seen that persons who had, in perfect health, effected assurances on their lives, died within a few months, and thereby left a provision for their surviving relatives, which they could not have done by any other means. It would be difficult to attempt to form any estimate of the comfort which, under the afflicting circumstances in which

* “The Hand Book of Life Assurers,” 1842.

they were placed, the surviving relatives of many of those persons must have experienced from the knowledge that, although they had suffered a heavy, and in some respects an irreparable loss, they were not left dependent upon others for support, but that the father and husband who had provided for the wants and necessities of his family during his life, had been equally mindful of the consequences which would arise to his widow and children at his death.

Life Assurance has claims upon those who are just setting out in the world, and by whom its benefits can be much more easily attained. We know of no present more appropriate from a father to his son, on the latter attaining manhood, than a policy of assurance on his life; special care being taken that the amount be suitable to his circumstances and prospects, and that the objects and requirements of the documents in question be properly explained.

An apparently trifling incident will oftentimes give a right direction to the thoughts and conduct of a youth, and determine his course during all his future years. The obligation imposed by a policy of assurance is as likely, we think, as any other to exercise a moral influence on the possessor. If the value of health, its importance, and the most rational means of preserving it be rightly understood; if habits of diligence, economy, kindness, and forethought be cultivated in early life by a man, there is hope that he will prosper in all he undertakes, and become an ornament and a blessing to the sphere in which he moves.

Having thus endeavoured to show the advantages emanating from Life Assurance, and the melancholy con-

sequences resulting from a neglect of it to those whose welfare should take precedence of all other worldly considerations, it is proper now to point out the characteristic features of Life Assurance.

The system is capable of affording to all ranks of society the advantages of which it is susceptible, from the artisan to the merchant, to the most elevated dignitaries of the Church, to the highest peer, who would preserve his domains for his immediate heir, and yet provide for the younger branches of his family by a proportionate economy in his establishment; thus remedying to some extent the effects of the law of entail, essentially necessary to the maintenance of the hereditary dignity of the ancient and landed interest of the empire.

Many persons of large hereditary estates have become insured with this view, and some adopt the salutary precaution of effecting a policy of assurance upon the birth of every child. To persons who make a reserve from their income as a future provision for their dependants, Life Assurance is most important, if only from the consideration that it produces a higher rate of interest for their money than they could obtain by their own investments.

There are many objects, most useful and beneficial in themselves, to which Life Assurance may be applied; the advantages to be derived in business transactions from the possession of a policy of assurance, the facility which it affords to individuals with fixed incomes, derived either from Government or other situations, from pensions or annuities on their lives, to transmit a provision to their representatives,—offers entire indemnity to creditors against loss by the demise of debtors; points out a ready mode by

which trustees may, with perfect security to themselves, make advances under marriage settlements; secures the continuance of leases terminable upon lives and renewable by fines; attaches responsibility to personal security, thereby assisting individuals to obtain loans, and guarantee repayments; anticipates and provides against the inconveniences and injury often occasioned by the withdrawal of capital from business on the death or retirement of a partner; and the granting of annuities. This branch of Life Assurance business is done on the same principle as the average probabilities of life; and it is desirable in the case of those who have a large sum which they can risk at once in exchange for a certain sum annually—this latter sum being larger than could be raised from ordinary interest. There can be no doubt that this can be often properly and advantageously effected.

When the parties purchasing the annuities have no relative nearly connected with them, or depending upon them, they obtain during their life a larger amount of comfort than they could otherwise have enjoyed.

Life annuities are of incalculable benefit to every man and woman depending for subsistence upon the skill of the hands, the accuracy of the senses, or continued power of active industry, either of the body or mind. A man is liable, after middle age especially, to illness and accidents, which render him more or less incapable of his customary exertions, and tend to lessen his income; and too often gradually reduce him to poverty and dependence. Public charities, hospitals, dispensaries, and workhouses abound with illustrations of this melancholy truth.

Persons of respectable education, and formerly living in comfort, are thus often reduced, as old age approaches,

to a level with the lowest of the poor. Not only servants, and workpeople, and artisans, and small tradesmen, but tutors, and governesses, and clerks, in various offices; artists, and those engaged in all the departments of literary labour, are to be found in numbers in London and in the country, passing the years of their declining age in miserable rooms, amidst sickness, poverty, and destitution.

Yet, perhaps, of these many distressed persons, there are few who could not have spared, in their years of activity, a small moiety from their earnings, by means of which such an annuity might be secured as would at least preserve them from the extremity of want, or from dependence on the uncertain charity of strangers.

But the great proportion of assurances are effected for the purpose of securing family provisions; and there can be no doubt that that was the object which the first projectors of the system had in view.

Its judicious application to the varied and complicated arrangements of property has been a work of gradual development; and science has proved that a real value is given to a variety of interests which are necessarily uncertain when contingent upon human life.

Life Assurance provides not only a valuable means of securing loans and other property dependent on the lives of individuals, but affords provision for families to professional persons, or those living on salaries or wages; such as lawyers, physicians, military and naval officers, clerks in public or private offices, whose incomes terminate with their lives, and others, who are not possessed of capital, and who ought naturally to provide for the comfortable subsistence of their family in the event of their death. We will suppose a person thus situated, without fortune,

but making, perhaps, £1,000 or £2,000 a year by his business, who marries, and has a family. If this individual attain the average duration of human life, he may accumulate such a fortune as will provide adequately for the support of his family at his death. But who will presume that such will be the case—that he will not be one of the many exceptions to the general rule? And supposing that he was hurried into an untimely grave, his family would necessarily be destitute.

Nor are the benefits of Life Assurance limited to those dependent for subsistence on their own exertions, whether by commercial pursuits, by official stations, by the learned, or any of the other pursuits, by courtesy termed professions. The man of independent fortune is frequently as incapable of making provision by any other means than this for his wife and younger children as are any of those persons belonging to the classes above enumerated. Supposing that the whole of such a man's property be at his absolute disposal, a sum which may be ample during the lifetime of the parents to sustain the rank and respectability of the family would prove but a sorry means of independence when divided into five, or seven, or ten equal portions.

Now it is for such contingencies that Life Assurance is intended chiefly to provide. An individual possessed of an income terminating at his death agrees to pay a certain sum annually to an Assurance Office; and this office binds itself to pay to his family at his death a sum equivalent, after deduction of the expenses of management and the profits of the insurers, to what these annual contributions, accumulated at compound interest, would amount to, supposing the insured to reach the common and average period

of human life. Though he were to die the day after the assurance was effected his family would be as amply provided for as it is likely they would be by his accumulations, were his life of the ordinary duration. In all cases, indeed, in which those insured die before attaining an average age, their gain is obvious. But even in those cases in which their lives are prolonged beyond the ordinary term, they are not losers. They then merely pay for the security which they must otherwise have been without. During the whole period, from the time when they effect their insurances, down to the time when they arrive at the mean duration of human life, they are protected against the risk of dying without leaving their families sufficiently provided for, and the sum which they pay after having passed this mean term is nothing more than a fair compensation for the security they previously enjoyed.

Of those who insure houses against fire a very small proportion only have occasion to claim an indemnity for losses actually sustained; but the possession of a security against loss in the event of accident is a sufficient motive to induce every prudent individual to insure his property. The case of Life Assurance is in no respect different. When established on a proper footing, the extra sums which those pay whose lives exceed the estimated duration is but the value of the previous security. These are some of the leading features illustrative of the benefits conferred upon mankind by the science of Life Assurance.

Life Assurance affords the opportunity of restoring to a family any amount of capital which the parent may have sunk on an estate, to hold it as a tenant for life, or for two or three lives; this system is particularly applicable

to property held under ecclesiastical dignitaries, charity, and other trusts.

Life policies are of the utmost value, whether in commercial or agricultural pursuits; also to persons desirous of procuring cash credit with a bank an assurance is a security; as well as to any person deriving an income from an annuity payable during the life of another. In each of these cases Life Assurance, as Mr. Babbage expresses it, "renders that certain which Nature has made uncertain."

With regard to the other purposes to which Life Assurance may be applied, there is scarcely a single case, whether of a strictly business character, or with a view to family arrangements, where human life forms an element in the transaction, to which Life Assurance may not be made available to some useful purpose. It is impossible to trace the various ramifications, or to point out each case individually, but some of those most common have already been referred to. There is no limit to the extension of its applications if the public were fully aware of its principles, and the safety with which they may be put in practice in a country of such extensive commercial relations as Great Britain.

Assurance will impoverish no man, but will save from indigence millions of families, and place them in a state of security, and in its prodigious developments afford in its applications the attainment of an object the most exalted that can be contemplated; and experience demonstrates that Life Assurance is the most precious of earthly gifts, and is one of the happiest discoveries of man—it removes the greatest source of wretchedness and crime, and substitutes for idleness, industry; for extravagance, economy; for intemperance, sobriety; for want, competence—it dis-

arms the chamber of death of some of its most painful anticipations, the desolation of an orphan family, the loneliness of a disconsolate widow; it mitigates the sorrows of a bed of sickness, by the knowledge that those who depend on the life of a single individual are provided for, and even the consciousness that provision has been made against the contingency of death offers in itself one of the best securities to the man anxious to provide for those helpless beings who are the objects of his daily solicitude. We can, then, only ascribe the apathy which has hitherto prevented the wider extension of Life Assurance to the circumstance that the public are imperfectly acquainted with the theory of insurance, and its kindred science of annuities, as affording an equitable investment for the savings of those whose time and industry are their capital, and who cannot, therefore, bestow attention in investigating the soundness of the principle safely and effectually for themselves.

CONDITIONS OF A POLICY OF ASSURANCE.

Having in the preceding pages exhibited the advantages of Life Assurance, it is most desirable to point out to those seeking to make a provision for their families the mode of effecting a Life Assurance, and the basis of a policy.

We will now endeavour to explain the mode to be adopted by persons after a determination has been made to effect an assurance either on their own lives, or the lives of others.

When the office is selected in which a party intends to insure, he will be required to fill up a form called a "Life Proposal and Declaration."

This form requires an accurate account to be written thereon of the name, occupation, place of birth, age, habits of life, and past and present state of health of the person on whose behalf the proposal is made. It will also require the name, occupation, and residence of one or more private friends of the proposer, sufficiently acquainted with him to be able to give satisfactory replies respecting his habits, appearance, and general health. It will further require the name and residence of the proposer's usual medical attendant.

These several matters are to be authenticated by the signature of the persons to whom they relate, the form is returned to the office, the necessary inquiries are instituted, and the individual is then examined on behalf of the company by a physician or surgeon resident in the same town as himself.

If, after due examination and inquiry, the proposal be

accepted, the decision of the board of directors is entered upon the minutes, and a certain time is appointed for the payment of the first premium, which if paid within a specified period (usually thirty days), a policy of assurance will be issued, and the contract on both sides completed on the payment of the first premium; the amount of the stamp-duty* must also be paid, and, in some of the old offices, an entrance fee of 5s. or 10s. per cent. on the amount assured. †

In every policy there is a special reference to the truth of the statements made by the person assured; and such are the expressed conditions on which the validity of the contract depends. If it should subsequently appear that any erroneous statement had been made, either through ignorance or inadvertence, by the assurer or by others on his behalf, he forfeits the whole of the premiums paid, and the policy becomes void. ‡

* The charge made for policy stamps may be consistently viewed as a direct "tax upon prudence," and experience has shown that it is a great impediment to the full development of Life Assurance. Assurers should at once be relieved of this burthen; and the stamp-duty be either spread over the premiums, or charged as a working expense upon the office. Every policy should be granted free of stamp-duty to the assured.

† Fines for the renewal of policies are very objectionable, because, in a large majority of cases, default has occurred from a temporary inability to pay; and regard should be had to the fact that the office is relieved from liability, and that the policies can only be revived upon fresh medical evidence of the eligibility for assurance of the parties; it would be, therefore, only just to the policy holders to dispense with such fine, as it is contrary to the interest of the assured, and would afford evidence of the disposition of assurance boards to carry into effect one of its obvious advantages, "liberality to policy holders."

‡ See Validity and Non-Validity of Life Policies, page 119.

It is now necessary to state what takes place after the decease of the party. The death must be announced to the office, together with all the particulars as to the burial of the deceased, evidences of his identity, and references to, and certificates from the medical person who attended him in his illness, with the probate of his will, if the policy were effected on his life, and a copy of the assignment, if the policy had been transferred to another person.

The cause of death must also be ascertained, as the policy would be void if the death took place by suicide, duelling, or the hands of justice, or upon the high seas, without licence from the company, excepting it occurred in travelling from one part of the kingdom to another; all of which are excepted in the policy.

It is the practice with most of the offices to pay claims on policies at the end of three months after satisfactory proof of death of the assured. Several of the old offices require six months, and some two months when the claim exceeds £100, and others only thirty days for all claims not exceeding £100 and under. According to the rule of most offices, although all claims may be paid in one, two, three, or six months, they may be received immediately after due investigation has been made into the truth of the various statements of the representatives of the party whose life was assured, upon allowing the usual rate of discount for the unexpired time; and on all sums not exceeding £200 an advance of one-third will, if required, be made immediately.

Such are the forms of proceeding and rules connected with a policy of assurance during the life and death of the assured.

SELECTION OF AN OFFICE.

We have explained the conditions of a policy ; the selection of an office at which to effect a Life Assurance becomes to all a matter of great importance, as upon the first contract the future provision and comfort of a family depend.

It will be obvious that the very object of an assurance is that there shall not be any doubt as to the result, that if so much is paid by way of premium, so much money shall be paid to the representatives of the assured at his death ; it is therefore highly essential, in choosing the office in which to effect an assurance between the various Assurance Companies, to consider—

1st. The principles upon which they are founded.

2nd. The manner in which their business is conducted.

3rd. The security which they offer to the assured.

Satisfactory information on these several points should be ascertained by judicious inquiry before effecting a policy of assurance. The prospectuses ordinarily issued by companies contain only an outline of their plans, and by no means furnish information sufficient to enable the proposed assurer to form an opinion as to the management and security of a Life Office. In order, however, to enable the public to form a just estimate of the present system of Life Assurance, this work will to some extent show the provident designs of the science of Life Assurance. The system adopted by the majority of Assurance Offices is such that no security is afforded to the representatives of the assured.

It has been proved by experience that the companies

termed "Mutual Life Assurance Societies" are the most legitimate for assuring life, as a high authority* stated that only a small sum for necessary expenses at starting is required, after which the premiums form of themselves an amply sufficient guarantee for the due fulfilment of all engagements, and Mutual Societies are in possession of the largest accumulated funds, and have distributed amongst the assured the greatest amount of profit.

Secondly. The method of conducting business varies in different offices; an assurance for the whole of life once commenced cannot be abandoned, or removed from one office to another without a considerable sacrifice, and the payment of an increased rate of premium, in consequence of the more advanced age of the assured. The tables of rates are of vital importance to the assured, and it should be ascertained that the premiums are not rated too low to be safe tables. That the assured may satisfy himself on that point, we should direct his attention to the names of the directors; if they are of an unquestionable moral stamp, standing, and character, and are truly identified with its interests and management, he may safely assure even at a low scale of rates, for no board of directors would sacrifice perfect security for the shadowy substance of a temporary increase of business. But on these heads the assured should satisfy himself, as such is his only real security.

Thirdly. With respect to the claims on the company, it is expressly stipulated that in the event of any untrue averment or assertion which may hereafter be proved, the policies, and all moneys paid in respect of

* De Morgan.

such policies, shall be absolutely forfeited to such company.*

This questionable security which attaches to every life policy is dependent upon the discretion of a board of directors, whose decisions are governed by the rules of technical points of law. The character and principles of the directors are the main dependencies upon which a prudent man may decide whether he is justified in trusting his accumulations to an office in which the power exists to invalidate at option his assurance. It is evident that the honour and integrity of individual directors are not a sufficient guarantee for the absolute payment of a life policy.

We would venture to submit to those whose families depend for their future subsistence upon the validity of a life policy, not to be seduced merely by a low scale of premiums, high-sounding names, or by declared or promised large bonuses, but to satisfy themselves that the office they propose to insure in is not in the habit of throwing obstacles in the way of the payment of the sums that have been assured.

So long, however, as offices are permitted to possess all these means of getting out of the payment of their policies when they become claims, all the public can do is to endeavour to protect themselves by a careful selection of the

* We have already shown, in the chapter on "Validity and Non-Validity of Life Policies," the objections to life policies, and explained the doctrine of law by which an advantage is taken of the assured, and the insecurities of the contract under the policy deed; and that if the office avail themselves of the strict rules of law, they can successfully dispute a policy, if the assured should unintentionally mistake his age, or accidentally conceal any bodily ailment or infirmity, or if the statements are not in unison, vitiate the policy, and render an assurance valueless as a family provision, or as security in pecuniary transactions.

office in which they insure, and to avoid such offices as repudiate just and equitable claims.

Let the choice be an office pledged to fulfil the conditions of a contract by a specific clause in their deed of settlement, and not to dispute any claim where there is no uncertainty or risk; for a claim which cannot be disputed is the only determination to which a prudent man can look forward with any satisfaction as the completion of the transaction on which he enters when he assures his life, whose daily bread and whose family's subsistence depend on his individual exertions, to lay up in store a small portion of his hard earnings against that day when his individual exertions must be paralysed, and the hands that procured his wife and children their day's subsistence will have ceased their toil for ever.

CONCLUSION.

We have now gone through the several points forming the subject matter of this treatise ; our object has been not to present a work of an elaborate scientific analysis of the comparative claims of the various modes of Life Assurance, but simply to afford the means of forming a familiar conception of the principles and practice of assurance, intended to act as a corrective to several popular misapprehensions regarding a science which is as yet in its infancy, and to awaken the community to the necessity of the value of a policy of assurance, either personal or contingent, by exhibiting the most important principles of Life Assurance.

The subject, it will be admitted, is one of importance ; and the more it is considered the greater probability there will be of improvements being introduced both in the value of health and life, and in the method of investigating the subject.

To the community generally it is not only interesting but important to be made acquainted with the means of effecting the welfare and happiness of their children, and therefore highly desirable that they should have a familiar knowledge as to the nature and extent of the advantages of Life Assurance to guide them in their decision if they contemplate making a provision for their families. We hope that the consideration of the subject, and the suggestions which have been proposed, may lead to improvement in the conduct and habits of individuals, and consequently to the health and happiness of mankind.

Our object has been to explain the advantages which

are offered to a very large portion of society by the scheme of Life Assurance. In a social and in a moral point of view it is a subject of vast importance; but it must be remembered that it is only by adopting habits and principles of prospective economy that the prudent man will see the force of what we have advanced in the foregoing pages. We have no doubt the public mind will be slow to awaken from its apathy on the subject; but let us repeat the maxims of prudence again and again, and the result will follow. It is a scheme in which all parties may cordially unite, and no difference of opinion ought here to interpose.

The sceptic indeed may exercise his characteristic caution in the examination of tables and accounts, but every philanthropist will, we trust, approve of the principle.

We have not rendered this subject so interesting and attractive as many persons may have expected. There are indeed subjects more attractive, questions more stirring than that of Life Assurance; it presents no path to ambition, raises no strife of party politics; it has higher and purer aims—it presents an extended sphere of usefulness, and ample opportunities of making provision for our families.

One of the most obvious and immediate advantages that would result to the nation at large from the extensive establishment of safely-founded Assurance Societies would be a sensible diminution of the poor's-rate.

The first effect on such rate would necessarily be to relieve the public from a portion of those claims which are now largely made on them by individuals who, having no other resource, at such a time are obliged to seek parochial aid. Another effect would be produced by parishes being re-

lieved from the support of all such old and infirm persons as should have made a provision for the decline of life.

The poor's-rate would also be relieved from a great part of those charges now incurred in every parish for the burial of the poor. These are direct benefits. But it cannot be doubted that the moral effects capable of being produced by the associations in question would be even more beneficial to the community than the direct pecuniary advantage through the poor's-rate. There is well-grounded reason to believe that the wide diffusion of such institutions would arouse the energies of man to a sense of independence, a better tone of feeling, habits of prudence and economy, and afford all the incentives to general and moral improvement.

The great benefit that would result to society at large by the general adoption of Life Assurance among all classes deserves the serious attention of the philanthropist, and claims the efforts of every one anxious for the welfare of his fellow men, to do all in his power to promote among them a disposition to provide for themselves and families through the medium of Life Assurance. Impressed with the truth of these remarks, after several years of practical experience, the author resolved to undertake the composition of this work, and has attempted to treat the subject in such a manner as to enlighten and instruct those who are desirous to study the science without becoming dull and uninteresting, although from the first the subject promised but little of an amusing character. If we may be allowed to play upon words, there is a great difference between matters of "interest" and interesting matters.

Such have been the author's objects; enamoured of the science, and anxious for its advancement, his most ardent

desire is that this work may meet with a favourable, or rather an indulgent reception; and let the reader ascribe any failure to the insufficiency of the author, but let the subject sink deeply into his mind, for it is worthy of repeated consideration; and we feel satisfied that every practical philanthropist at least will approve of the effort, however feeble, to facilitate the extension of a clear and familiar knowledge of the science and practice of Life Assurance.

FINIS.

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